



IRAQ

ALL HANDS

Desert Storm Special Issue
The Navy-Marine Corps Team

KUWAIT

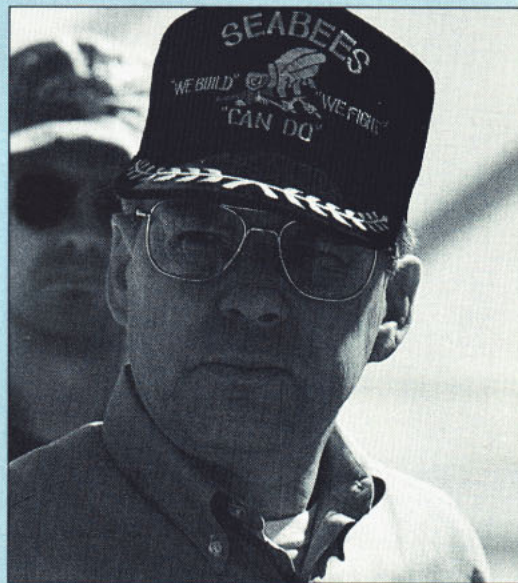
SAUDI ARABIA





THE SECRETARY OF THE NAVY
WASHINGTON

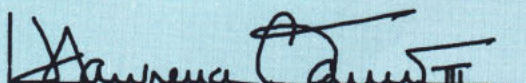
A MESSAGE FROM THE SECRETARY



On the 2nd of August, 1990, Saddam Hussein thought America lacked the courage, the power, and the will to stand up to his brutal invasion of Kuwait. You--the men and women who serve this nation in uniform--proved him dead wrong. With skill and courage you liberated Kuwait and crushed Iraqi aggression.

You have earned many times over the utmost respect and gratitude of free peoples everywhere. Your performance during Operations Desert Shield and Desert Storm was nothing less than spectacular and was truly in keeping with the gallant traditions of the United States naval service. Our hearts go out for those who have made the supreme sacrifice on behalf of freedom and justice. We can only take comfort in the knowledge that their sacrifice was not in vain and will never be forgotten.

I want to take advantage of this special edition of ALL HANDS to tell you again how proud I am of all of our Sailors and Marines and their families who support them. It is important for Americans to realize that victory in the gulf was won not just by the men and women directly deployed to the area of operations, but rather by everyone in the entire organization who contributed to the training, readiness, support, and professional ethic of the United States Navy and Marine Corps. Certainly those of you standing guard today in distant parts of the globe are every bit as vital to America's security as those who have weathered the crucible of war. On behalf of a grateful nation, I congratulate you and thank you all. May God bless each of you and your families.


H. Lawrence Garrett, III



A MESSAGE FROM THE CHIEF OF NAVAL OPERATIONS

Operations DESERT SHIELD and DESERT STORM were a magnificent chapter in the history of our Navy and our nation. Our hardware worked, our systems worked and our training worked. But most important, you worked. The superb professionalism and skill you demonstrated were directly responsible for the significant and successful contributions made by the U.S. Navy to the allied military coalition.

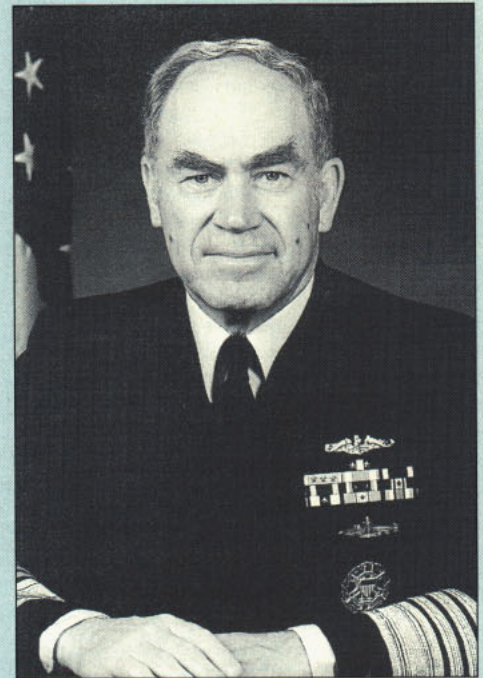
Our active, reserve and civilian personnel serving in the region, those deployed to other areas of the world and those who supported our forces from shore commands were critical to the allied victory. All of you did your part, and performed exceptionally.

The rapid and effective integration of reserve forces into active units proved the strength of our total force concept. The moral courage and devotion to duty displayed by our POWs inspired us all. And I share with you the hope that our missing comrades will soon be recovered. We also remember those who have made the ultimate sacrifice. We will forever honor their valor and preserve their memory.

Through it all, we drew great strength from the personal sacrifice and unwavering support of our families and the American people. Each of us who wears the uniform, or works directly alongside those who do, will be eternally grateful for their continuing belief in us.

I am proud of each of you.

Frank B. Kelso II
FRANK B. KELSO, II
Admiral, U.S. Navy



A MESSAGE FROM THE COMMANDANT OF THE MARINE CORPS

It is with great pride that we reflect upon the superb execution of Operation Desert Storm by our Armed Forces. Professionalism, countless hours of training, and a disciplined strength of character resulted in a decisive victory.

Our historic triumph could not have been possible without our total force. While world attention largely focused on those who directly supported Desert Shield and Desert Storm, the Navy-Marine Corps team continued to fulfill its responsibilities throughout the globe. We are indeed a force-in-readiness.

The extraordinary public support for our young men and women who endure the hardships of separation and the uncertainties of conflict, is appreciated. The American people are proud, and rightfully so, for we have the finest fighting forces in the world today. Semper Fidelis.

A. M. Gay
A. M. GAY
General, U.S. Marine Corps



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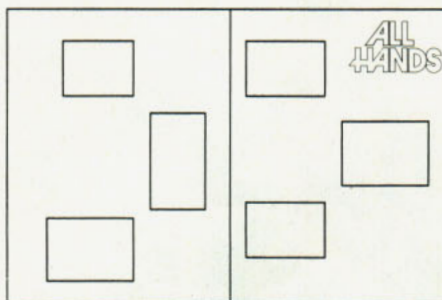
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ALL HANDS

MAGAZINE OF THE U.S. NAVY
 SPECIAL ISSUE - NUMBER 892
 68th YEAR OF PUBLICATION

This magazine is dedicated to the men and women of the Navy and Marine Corps who served during Operations Desert Shield and Desert Storm, to the millions of patriotic Americans across the nation who supported them and to those who remain on station today defending freedom.

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Map courtesy of National Geographic Society

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Back cover: Photos by PH1(AC) Scott M. Allen

Inside Back: Photo by PH1 Bruce Morris

The Gulf war

Victory through versatility

After legions of the world's fourth largest army poured across the Kuwaiti border Aug. 2, 1990, the U.S. military formed the foundation for a powerful 29-nation coalition united against Iraq's brutal and unlawful invasion of its tiny neighbor. The foundation's maritime power was provided by the Navy-Marine Corps team, whose inherent flexibility and sustainability paved the way for the U.S.-led allied air and ground forces, and subsequently, the way to victory.

At the time of the invasion, the Navy-Marine Corps team was already on station. The ships of Joint Task Force Middle East, a presence in the region since 1949, were immediately placed on alert, while the USS *Independence* (CV 62) and USS *Dwight D. Eisenhower* (CVN 69) battle groups sped from the Indian Ocean and Eastern Mediterranean to take up positions in the Gulf of Oman and Red Sea. Once on station, the ships provided the first U.S. military assets capable of a sustained presence and power projection ashore.

When President Bush ordered the historic deployment of troops and equipment to the Middle East, long-established maritime superiority allowed the U.S. to undertake the largest strategic sealift of supplies in history, with more than 250 ships carrying nearly 18.5 billion pounds of equipment and supplies to sustain *Desert Shield/Storm* forces. Maritime superiority also afforded allied naval forces the ability to implement and sustain U.N. trade sanctions against Iraq, immediately after they were imposed, severing Saddam's economic lifeline.

Low-key but close military ties with friendly Arab states, due in part to the more than 40-year Middle East Force presence, allowed for quick introduction of U.S. ground and air forces into Saudi Arabia and other Gulf states early in the crisis. When U.S. Marines began arriving in Saudi Arabia, their supplies and equipment were close at hand. Forward-deployed maritime pre-positioning ships based out of Diego Garcia carried enough tanks, artillery and ammunition to sustain 16,800 *Desert Shield* Marines for 30 days. The ships' proximity to the theater of operations allowed Marines to begin offloading their supplies in Saudi Arabia less than two weeks after the invasion.

Under the Navy's total force concept, more than 21,000 Navy and 31,000 Marine Corps reservists were recalled to active duty in support of Operations *Desert Shield/Storm*. Serving in specialties from medicine to mine warfare, reservists were sent to work alongside their counterparts in the Persian Gulf. Others filled critical vacancies on the home front.

The massive deployment of troops, coupled with Saddam's defiance of diplomatic efforts to solve the crisis, manifested itself in a fiery shower of bombs and missiles over Baghdad in the early



Photo by PH1 (A/C) Scott M. Allen

morning hours of Jan. 17. The relentless air war decimated Iraq's military infrastructure, severing communication and supply lines, smashing weapons arsenals and destroying troop morale.

The first shots fired were from Navy ships in the Persian Gulf and Red Sea, as they launched salvos from their arsenals of *Tomahawk* cruise missiles against targets in Iraq and Kuwait. The *Tomahawks* were just one member of a new generation of naval weapons which proved their precision capability in combat.

Just as impressive and successful as the air war was the ground offensive, an assault that saw allied forces sweep through beleaguered Iraqi defenses in blitzkrieg fashion, leaving burning tanks, empty bunkers and U.S. flags in their wake.

The allied push into Kuwait and Southern Iraq was made easier by the amphibious forces on station in the Persian Gulf. Their presence alone forced tens of thousands of Saddam's troops to maintain positions along the Kuwaiti coastline to defend against an attack from the sea that never came. After a mere 100 hours, Saddam's army was crushed. His troops — tired, hungry and war-weary from five months of economic blockade and more than a month of relentless allied bombing — surrendered by the thousands.

But not all battles took place in-theater; another was fought and won on the home front. Scattered protests during *Desert Shield* were soon drowned in a sea of flags, yellow ribbons and overshadowed by demonstrations in support of the troops. Public support for the commander-in-chief's handling of the Gulf crisis reached historic levels, and when sailors and Marines came home, they did so to welcome ceremonies of epic proportions.

When all was said and done, America and her allies proved that freedom was worth fighting for. The versatile Navy-Marine Corps team formed the maritime foundation for the powerful alliance that showed Iraq and the world that brutality and terrorism were two qualities that would not be tolerated. Less than seven months after the Iraqi invasion, Kuwait was once again free. □

Historic presence

Sailors at "tip of the spear" for more than 40 years

Operations *Desert Shield/Storm* brought the largest number of Navy warships to a single operating area since World War II, adding a powerful punch to Navy forces already on-scene the night of Iraq's invasion of Kuwait. It is a presence the Navy has maintained continuously in the Persian Gulf region for more than 40 years.

At the end of World War II, the United States had no intention of keeping forces in the Gulf, a region mainly composed of British protectorates, although joint Arab-U.S. ventures had begun expanding oil refining capabilities in many Gulf states. Those refineries provided a cheaper, more efficient source of refined petroleum for U.S. ships operating in the Mediterranean, Indian Ocean and Western Pacific than fuel transported from storage facilities in the United States.

By summer 1946, the Navy was obtaining about half of its fuel from the Gulf region, and for that reason, placed a small support force in the tiny island nation of Bahrain. During the next two years, long-term contracts were signed, and about a dozen Navy-chartered tankers were moving their precious fuel loads in and out of the Persian Gulf.

Task Force 126, U.S. Naval Forces, Persian Gulf, was set up in Bahrain Jan. 20, 1948, as overall administrative coordinator for Navy operations in the region. As Britain began liquidating the remainder of her empire in Asia and Africa following World War II, Middle East Force (MidEastFor), one of the Navy's smallest major

commands, was established Aug. 16, 1949.

Shedding its initial mission as seaplane tenders, the "little white fleet" of USS *Duxbury Bay* (AVP 38), USS *Greenwich Bay* (AVP 41) and USS *Valcour* (AVP 55) rotated duty as flagship for Commander MidEastFor and his staff. All three ships

For the next 20 years, three or four ships at a time were assigned to MidEastFor, generally a command ship and two or three small combatants such as destroyers or frigates. Because temperatures in the Persian Gulf, Red Sea and Indian Ocean often reached 130 degrees, the non-air-conditioned ships rotated every few months — a practice still followed today, with the exception of the forward-deployed command ship.

As Britain withdrew all forces east of the Suez Canal in the late 1960s, Gulf states began declaring independence from the crown, with Bahrain becoming a sovereign state in 1971. The United States had already worked out an agreement to take over piers, radio transmitters, warehouses and other facilities left vacant by the British, and USS *LaSalle* (AGF 3), an amphibious transport dock converted for Gulf staff duty, arrived at Mina Sulman pier as the MidEastFor flagship, Aug. 24, 1972.

Nicknamed "The Great White Ghost of the Arabian Coast" because of her color, *LaSalle* became a familiar site in the Middle East. Unlike the powerful

6th or 7th Fleet's primary mission of deterrence in the Mediterranean or Western Pacific, *LaSalle* and the small MidEastFor's peacetime mission was focused more toward building good relations. The force's role included "showing the flag" to generate goodwill and promote mutual understanding, and serving as the "tip of the spear" of United States presence to counter an aggressive Soviet Navy expansion in the region.



Photo by PH3 Henry Cleveland

were painted white to counter the region's extreme heat.

The forward-deployed flagship served as the protocol platform of the United States throughout the region for America's ambassador of goodwill — the sailor. Accompanied by one or two other warships during her tour, MidEastFor provided the United States' first line of defense for any crisis in the region, as well as humanitarian and emergency assistance.

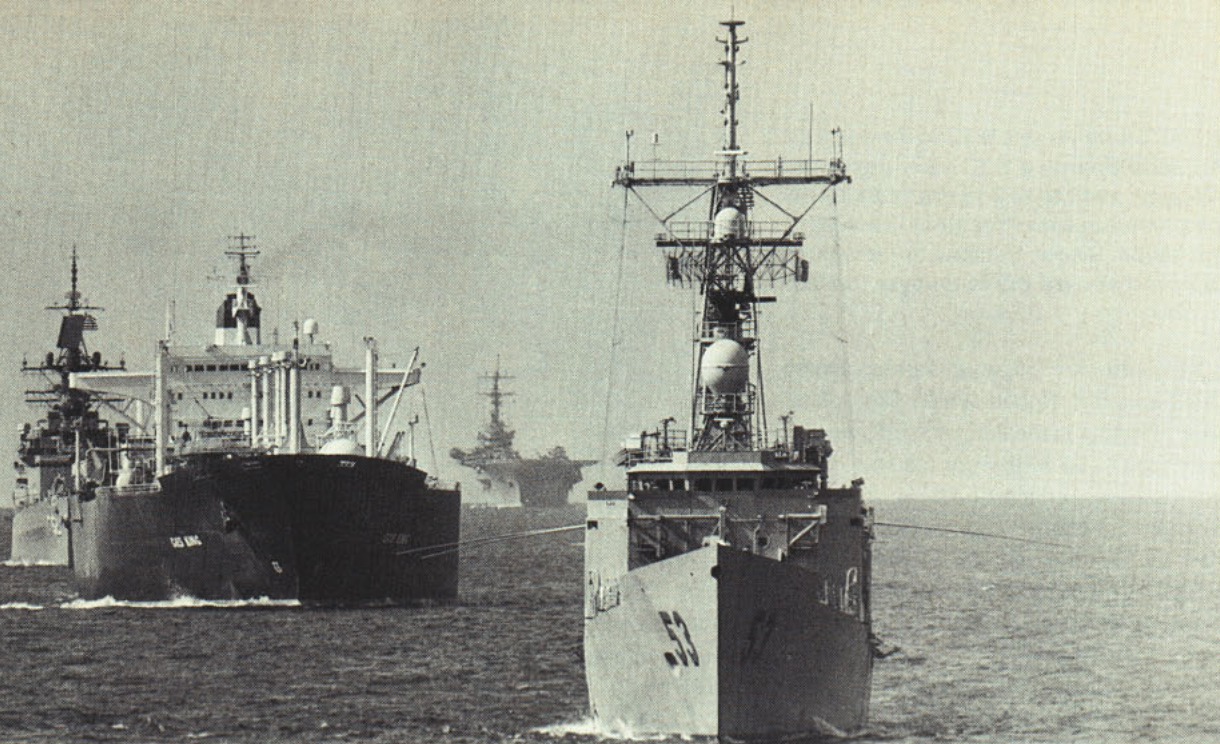


Photo by PH/ISW Jeff Elmer

Left: An Iranian oil platform ablaze following an attack by U.S. ships in October 1987. Above: USS *Hawes* (FFG 53) leads the re-flagged Kuwaiti tanker *Gas King*, USS *William H. Standley* (CG 32) and USS *Guadalcanal* (LPH 7) through the Persian Gulf during a 1987 Operation *Earnest Will* escort mission.

The 1970s brought increasing problems to a region already volatile with feuds stemming from centuries-old tribal disputes and the Arab world's rejection of Israel's right to exist. The Arab-Israeli War of 1973 caused rioting in Saudi Arabia and Bahrain, heightening tensions and anti-American sentiment for their ties to Israel. U.S. Navy ships stood ready to evacuate. After the tension passed, then-President Jimmy Carter, recognizing the importance of the region, negotiated for additional ports and other facilities.

Turmoil erupted again in February 1979 after fundamentalist mobs in Iran, led by the Ayatollah Khomeini, ousted Shah Mohammed Reza Pahlavi from power. In the confusion, thousands of potential victims, including American citizens, fled Iran. Six Navy ships carried more than 400 people, including 220 Americans, from ports in southern Iran.

During the 1979-1981 Iranian hostage crisis, nearly 30 U.S. ships were on constant patrol in the region, including one carrier battle group in either the Indian Ocean or North Arabian Sea. Carter ordered USS *Nimitz* (CVN 68) battle group

to the Indian Ocean to attempt a joint-service rescue of the 52 American hostages. Eight Americans were killed and five others wounded April 24, 1980, during the ill-fated rescue attempt.

National defense policy changed in 1980 when the Carter doctrine altered the role of deterrence in the Middle East to active defense of littoral countries. Defense responsibilities, which had passed from Britain to Iran during the past 30 years, fell to the United States for the first time after the Gulf states feared expansionistic tendencies of Iran's new Islamic fundamentalist regime under the Ayatollah.

Events in the Middle East convinced Carter that America required a means of rapid response to regional trouble spots. As a result, MidEastFor was placed under a new unified Rapid Deployment Force (RDF) in October 1980, and tied to contingency plans during crisis situations. In January 1983, as the Iran-Iraq war entered its third year, the RDF became United States Central Command (USCentCom), based at MacDill Air Force Base, Fla.

After 10 months of intermittent skirmishes over the Shatt al-Arab waterway, Iraqi fighter-bombers attacked 10 Iranian airfields, including Teheran airport, Sept. 22, 1980, launching a war that would last eight years. By 1982, more than 100,000 people had died in a war that cost each side \$1 billion a month and devastated both countries' oil industries. Both belligerents launched attacks on neutral merchant ves-

sels transiting Gulf waterways, prompting several Gulf states to seek protection from foreign navies.

On Nov. 1, 1986, Kuwait announced that it would seek international protection for its ships in the Persian Gulf. The United States offered to protect 11 Kuwaiti tankers Mar. 7, 1987. Kuwait accepted.

The Iran-Iraq war's effect on the region enveloped the U.S. Navy, May 17, 1987, when an Iraqi aircraft fired two *Exocet* missiles, killing 37 sailors and wounding 21 others aboard USS *Stark* (FFG 31). Iraq apologized, claiming "pilot error."

American units had already found a dozen mines in Persian Gulf shipping lanes when the Navy began escorting re-flagged Kuwaiti tankers during Operation *Earnest Will* in July 1987. During the very first escort mission, an Iranian mine ripped into the re-flagged supertanker *Bridgeton*. That first month, three tankers hit mines, a Navy F-14 fired two missiles at an Iranian F-4 (but missed) and minesweeping operations by helicopters towing countermeasures sleds began.

Later that month, U.S. forces captured the Iranian minelayer *Iran Ajr* while it was deploying bottom-moored mines in international transit lanes. Nine mines were found aboard the vessel before Navy gunfire sank the craft. U.S. helicopters repelled an attack by Iranian speedboats, and U.S. naval gunfire destroyed the Rostam oil platform in retaliation for an Iranian missile attack on a U.S.-flagged tanker.

Right: Saudi Arabia's King Abdul Aziz Ibn Saud boards a U.S. Navy destroyer in March 1945 to sail to the Suez Canal for a meeting with President Franklin D. Roosevelt. **Below:** Iranian contact mines captured aboard the minelayer *Iran Ajr* in 1987.



U.S. Navy Photo

On April 14, 1988, watchstanders aboard USS *Samuel B. Roberts* (FFG 58) sighted mines floating in the Persian Gulf approximately one-half mile from the ship. General quarters sounded, and *Roberts* backed away from the minefield. Twenty minutes after the sighting, *Roberts* struck a submerged mine, nearly ripping the warship in half. Working feverishly for seven hours, the crew was able to stabilize the ship. Only 10 crewmen were injured severely enough to require medical evacuation.

Three days later, forces of the now-Joint Task Force Middle East executed the American response — Operation *Praying Mantis*. During a two-day period, Navy, Marine Corps, Army and Air Force units under the command of RADM Tony Less destroyed two oil platforms used by Iran to

coordinate attacks on merchant shipping, sank or destroyed three Iranian warships and neutralized at least six Iranian speedboats. Operation *Praying Mantis*' success proved the validity of joint-service operations in the Middle Eastern theater — a prelude to the diverse coalition effort during Operations *Desert Shield/Storm*.

Three months later, after battling Iranian gunboats suspected of attacking merchant shipping, tragedy struck when USS *Vincennes* (CG 49) shot down an Iranian commercial airliner, mistaking it

for an Iranian F-14, killing 290 persons aboard. *Vincennes* issued several unacknowledged and unanswered warnings before firing.

Within two months, Iran and Iraq reached a fragile agreement to end hostilities — a "gentleman's agreement" that still held at the time of this publishing.

At the height of the Iran-Iraq war, MidEastFor was composed of more than 12 ships — twice the usual number. That force, augmented by mine countermeasures teams and special warfare units, together with rotating carrier battle groups deployed to the North Arabian Sea, made up America's largest deployed naval presence since the Vietnam era. The Navy's Administrative Support Unit contingent in Bahrain soared from less than 100 personnel to more than 800.

By the end of 1989, Navy presence in the Middle East had drawn down to the normal flagship and four or five other ships, monitoring the again-busy transit lanes of the Gulf, with an occasional aircraft carrier battle group on station in the Indian Ocean. United States maritime forces clearly benefited from years of operations in the harsh operating environment of the Middle East independent of major support bases.

With no permanent U.S. bases in the Middle East area, the Navy's forward-deployed ships became ever-important during the next two years as the United States struggled to maintain stability in the Persian Gulf region.

On Aug. 2, 1990, five U.S. warships and the flagship *LaSalle* were inside the Persian Gulf, ready to respond to their taskings on the night Iraq invaded Kuwait — once again the first forces on-scene and, as always, the last to leave. □

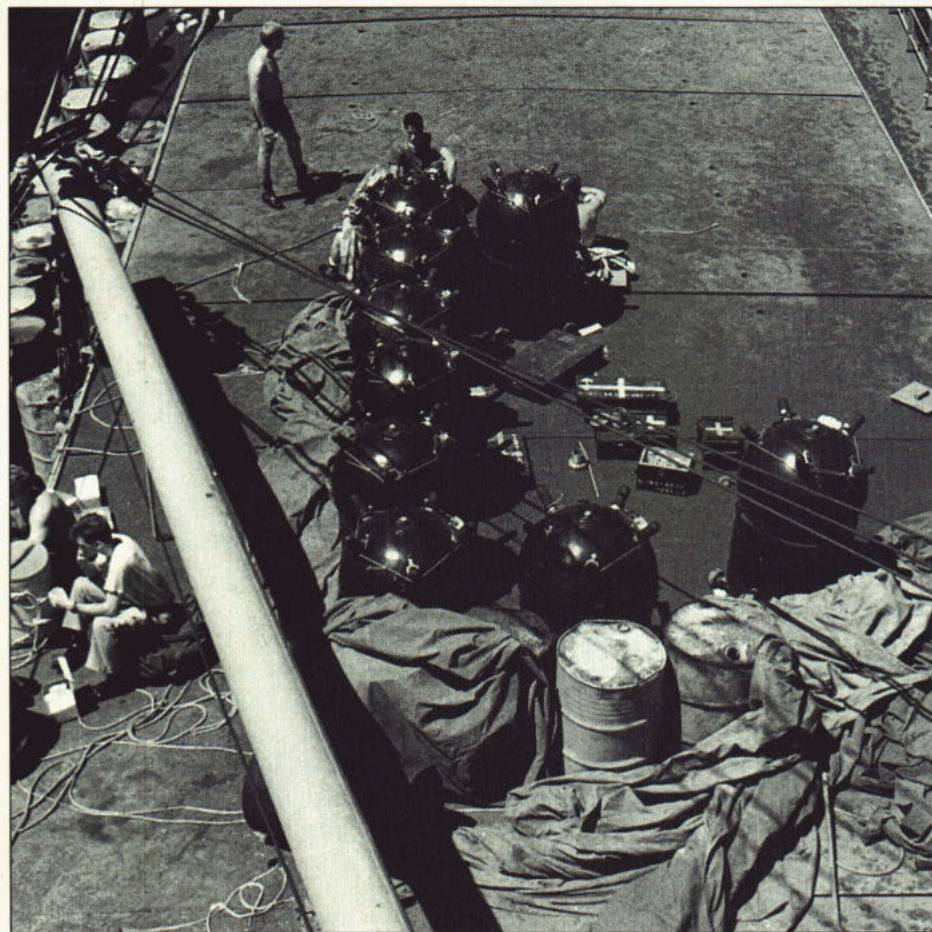


Photo by PH3 Henry Cleveland

Desert Shield sealift

Bringing beans, bullets and bandages

To comply with President Bush's orders for the massive troop, aircraft and ship deployment of Operation *Desert Shield*, Navy and civilian merchant marine sailors aboard Military Sealift Command's (MSC) sealift force rushed into action.

Within hours of the Aug. 8 deployment order, maritime pre-positioning ships (MPS) from Guam, Saipan and Diego Garcia headed full-steam for the Middle East, loaded with necessary supplies and equipment.

As in previous large logistic support operations during World War II, the Korean conflict and the Vietnam War, more than 95 percent of the heavy equipment, ammunition, fuel and other supplies for Operations *Desert Shield/Storm* had to go by sea. The strategic sealift crisis mission-falls into two categories: surge shipping during the initial mobilization and resupply or sustainment shipping.

The first three ships of MPS Squadron 2 raced from their Diego Garcia homeport to reach Saudi Arabia Aug. 15, marking the first use of the MPS concept in actual military operations. Within four days of their arrival in the port of Jubail, Navy cargo handlers averaged 100 lift-hours per day to offload more equipment and supplies from the three 755-foot ships than could have been moved by 3,000 C-141 cargo flights.

The 16,800 Marines of the 7th Marine Expeditionary Brigade (MEB), a component of the 1st Marine Expeditionary Force (MEF), arrived via the Military Airlift Command. They married up with the MPS equipment and were ready for combat by Aug. 20 — the first heavy ground combat capability in theater.

Five ships of MPS Squadron 2 brought the essentials to support the 7th MEB Marines for 30 days of combat — food; water; fuel; millions of pounds of aviation,

artillery and small arms ammunition; batteries; construction materials and medical supplies. The balance of the 1st MEF Marines' gear arrived from Guam aboard four ships of MPS Squadron 3.

MSC's eight fast sealift ships (FSS), the fastest cargo ships in the world, sped toward the Middle East at an average of 30 knots, their cargo holds bursting with 91,000 tons of equipment for the Army's 24th Infantry (Mechanized) Division, 1st Corps Support Command and other units.

Although normally on 96-hour standby,

the first FSS, USNS *Capella* (T-AKR 293), was ready to deploy in only 48 hours. The next two FSSs were less than 48 hours behind *Capella*.

MSC ship USNS *Regulus* (T-AKR 292), another FSS, carried a typical load of more than 700 Army vehicles, including M-1 Abrams tanks, Bradley infantry fighting vehicles and fuel trucks.

Ten afloat pre-positioning force (APF) ships carrying Army and Air Force equipment, fuel and supplies also headed for Middle East waters. Aboard the APF ship



Photo by PH1(A) Scott M. Allen

M-1 Abrams battle tanks line the pier in Savannah, Ga., for loading aboard the cargo ship USNS *Algol*.

MV *Noble Star*, the sprawling, 28-acre Fleet Hospital 5 was stored in more than 400 international standardized containers. The containers were soon unloaded in the first-ever deployment of the Navy's fleet hospital concept.

In addition, MSC called on 40 Ready Reserve Force ships to provide needed surge sealift to sustain the support for U.S. forces in Saudi Arabia. Civilian mariners answered the call as crews were quickly assembled.

MSC also chartered commercial ocean vessels to manage the flow of bullets and beans to waiting troops in Saudi Arabia. After Iraq was suspected of deploying ship-killing mines in the northern Persian Gulf, MSC contracted the heavy-lift ship *Super Servant III* to transport three U.S. Navy minesweepers and the newly-commissioned mine countermeasures ship, USS *Avenger* (MCM 1), to the region.

USNS *Mercy* (T-AH 19) and USNS *Comfort* (T-AH 20), 1000-bed floating hospitals, went from reduced operational status to fully-operational status within five days of the *Desert Shield* deployment order. They were staffed by nearly 2,500 Navy doctors, nurses and corpsmen from Navy medical facilities on both coasts.

"It shows the world that the United States is prepared to meet contingencies and protect its interests anytime, anyplace," said VADM Frank Donovan, MSC commander. "Both the government-owned and the commercial vessels in this operation have met the challenge of transporting military equipment to the contingency area in record time."

By September, more than 100 MSC ships were supporting the movement of Operation *Desert Shield* equipment. More than 100,000 U.S. military personnel and their equipment had been deployed to Saudi Arabia and the surrounding area in the first 30 days. Maritime superiority, assured by U.S. Navy forces, made possible the safe rapid deployment of MSC and civilian charter vessels.

When sealift phase one ended in mid-December, more than 180 ships assigned to or chartered by MSC were participating in the high-speed effort. The operation had transported nearly 7 billion pounds of fuel as well as 2.2 billion pounds of cargo. They had moved more cargo farther and faster than any time in history.

Phase two, which involved 220 ships under MSC's control, immediately promised to be a larger operation. The first few weeks of raging storms and nearly 40-foot seas did not slow the largest sealift effort since World War II. By March, an average of 84 million pounds of military cargo was arriving in Saudi Arabia each day.

That average contrasted sharply to the 57 million-pound daily average during the 37-month-long Korean conflict and the 33

Right: A Marine takes a break during MPS offloads in Jubail, Saudi Arabia. Below: Marine high-mobility multi-wheeled vehicles board a cargo ship in Saudi Arabia for the trip home.

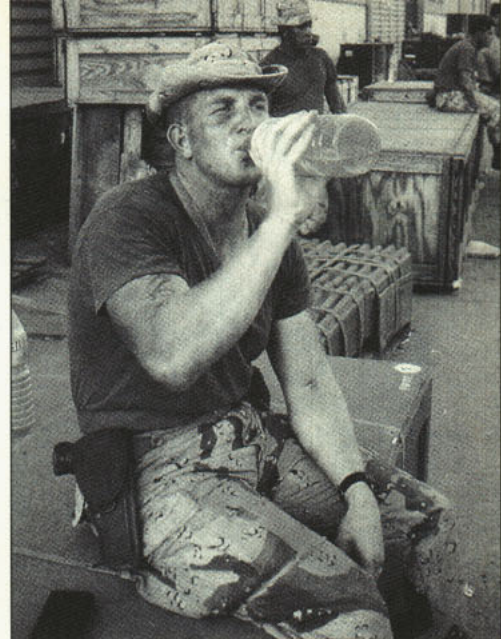


Photo by J02(SM) Joe Bartlett



U.S. Marine Corps Photo

million-pound daily average to the Pacific theater during World War II.

In the last week of December, dozens of ships pulled into Northern European ports to on-load U.S. Army equipment destined for the Middle East. To get there, crewmen braved rain and sleet driven by 50 to 60 knot winds and 36-foot seas. Despite the rough weather, this important cargo completed its 6,500-mile journey in time for Operation *Desert Storm*.

MSC's Herculean effort included moving more than 2,000 tanks, 2,200 armored vehicles, 1,000 assorted helicopters, hundreds of self-propelled howitzers and other equipment for the Army alone. Hundreds of additional aircraft, trucks and other combat equipment were also transported for the Marines and Air Force.

Tons of equipment for three Navy Fleet Hospitals, including ambulances, generators and other support gear, also traveled around the world to ensure the best medical care would be available. Nearly 12 billion pounds of fuel and hundreds of millions of pounds of ammunition also arrived.

With the exception of the Allied invasion of Normandy, which called for more than 20,000 vehicles and more than 176,000 troops to assault five beaches in two days — an effort that took two years of preparation — sealift for *Desert Shield/Storm*, with no prior buildup at all, is the largest and fastest sealift to a single operating area in the history of warfare. It was also the farthest, with the average voyage covering nearly 8,700 miles.

"I couldn't have asked more from our ships and personnel," Donovan said. "They did a superb job." Donovan attributed the sealift success to an unprecedented atmosphere of teamwork among MSC's 9,000 civilian workers, the nation's maritime industry, merchant marine sailors and military men and women, both active and reserve.

"Together," Donovan said, "we delivered the goods." □

Marine Corps light armored vehicles line the pier alongside the maritime pre-positioning ship *PFC Dewayne T. Williams* (T-AK 3009) in Jubail, Saudi Arabia.

Sealift: Investments of the '80s pay off

The major deployment of U.S. troops, aircraft and ships to the Middle East shifted the Military Sealift Command (MSC) into high gear. The MSC mobilization effort proved that the Navy's multi-billion dollar investment of the 1980s into strategic sealift was worth every penny.

Until 1978, the primary sealift mission was to move men and equipment to Europe to defend against a Soviet/Warsaw Pact attack. The central front would be 3,600 miles away and supported by 400 NATO allied merchant vessels, as well as an active U.S. Merchant Marine that numbered 578 major ships in 1978.

The mission also assumed adequate warning time. No one predicted that those 578 ships would dwindle to 367 in the next 12 years.

The Iranian crisis and Soviet invasion of Afghanistan in the late 1970s placed renewed emphasis on rapid deployment forces. These events forced planners to focus on remote contingencies in distant regions, such as Southwest Asia, in addition to the NATO-Soviet mission in Europe.

The Navy and Defense Department recognized serious deficiencies in sealift capability were developing. Fast cargo ship and pre-positioning programs were primary considerations as planners weighed the possible contingencies of the 1980s and 1990s.

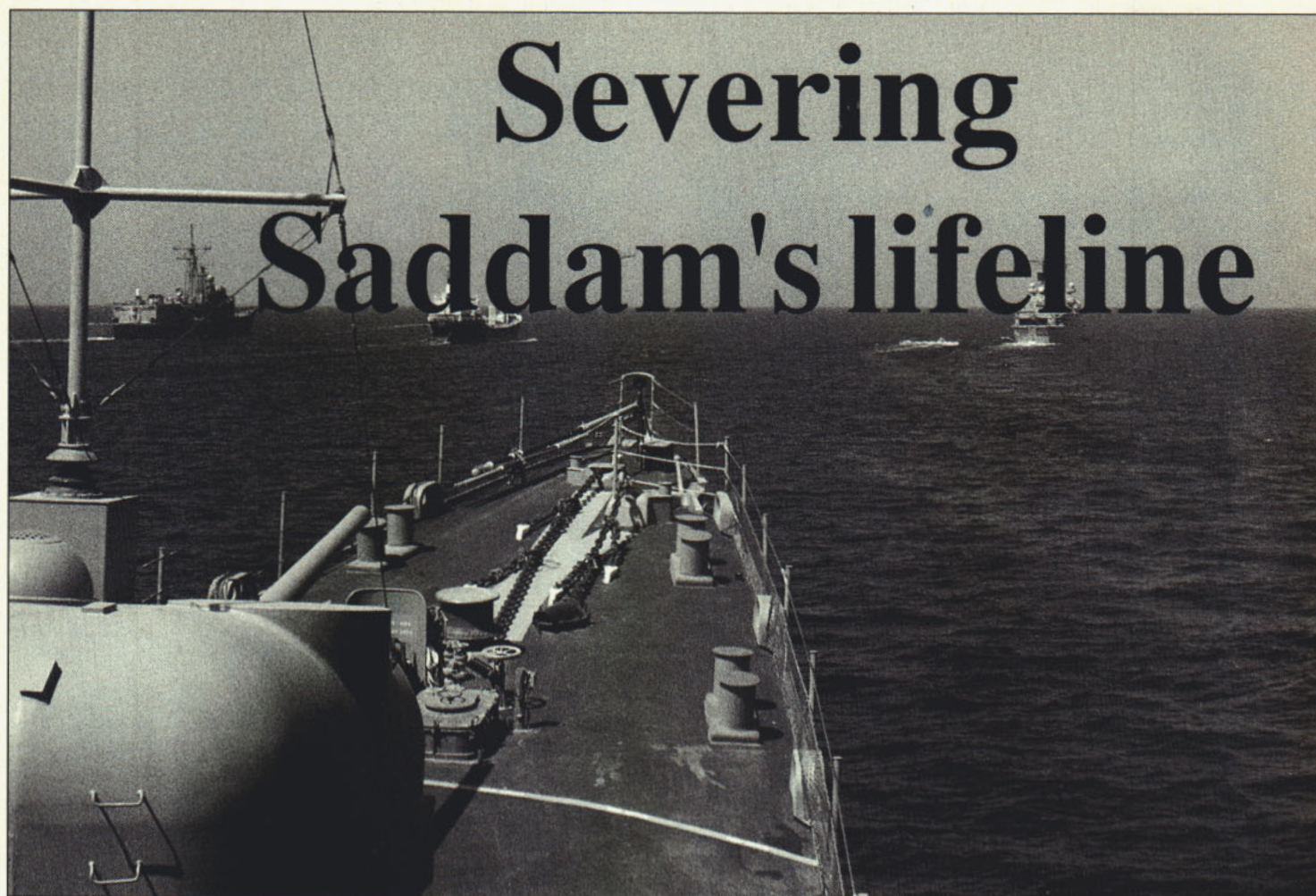
After a comprehensive examination by the Navy, Marine Corps, Center for Naval Analyses and Office of the Secretary of Defense, the maritime pre-positioning ship and afloat pre-positioning force programs were approved in 1980. The importance of strategic sealift capability was formally recognized in 1984 when the Secretary of the Navy gave it equal status with the Navy's three other main functions, sea control, power projection and strategic deterrence.

The Navy has invested more than \$7 billion on the sealift improvement effort to provide maximum transport capability and medical support with minimum delay. For this amount, the following ships have been purchased or long-term leased: 96 Ready Reserve Force, 13 maritime pre-positioning force, 13 afloat pre-positioning force, 8 fast sealift, 2 hospital and 2 aviation logistics support.

The *Desert Shield* sealift response showed that the Navy's investment has paid off handsomely. □



Photo by JO2(SW) Joe Bartlett



Severing Saddam's lifeline

Maritime interception controls the flow to Iraq

President Bush's commitment of U.S. forces to the Middle East posed a great challenge — prepare for war halfway around the world. Control of nearly 250,000 square miles of sea lanes in and around the Middle East transformed the Navy's mission from monitoring U.S.-flagged ships to enforcement of economic sanctions against Iraq.

As Saddam Hussein's 100,000-strong, battle-seasoned invasion force crossed Iraq's border with Kuwait Aug. 2, 1990, USS *Robert G. Bradley* (FFG 49) was patrolling the Gulf less than 50 miles off the Kuwait coastline, one of eight warships assigned to the Middle East Force (MidEastFor).

"We heard pleas for help from Kuwait over the bridge-to-bridge radio over and over again," said LTJG Ted Anderson, *Bradley*'s combat systems officer. "It made us realize just how real it was."

Bradley manned battle stations at first word of the Iraqi invasion to guard against possible attack by air or sea. Six days later, *Bradley* and her fellow MidEastFor warships became the "tip of the spear" of Operation *Desert Shield*.

After around-the-clock diplomatic arm wrestling, the permanent member nations of the U.N. Security Council passed Resolution 661, authorizing multinational naval vessels to begin enforcing sanctions against Iraq. Lookouts aboard U.S. ships patrolling

the Persian Gulf, Gulf of Oman and Red Sea scoured the horizon in a constant vigil, eyeing merchant vessels transiting vast shipping lanes. The main mission of these ships: stop Iraq's economic lifeblood from flowing through Middle East waters.

That lifeblood was oil, responsible for 95 percent of Iraq's revenue, and was already slowed with the shutting off of Iraqi pipelines to Turkey and Saudi Arabia. Tankers loaded with Kuwaiti crude were essentially paralyzed in port as coalition naval forces massed inside the Persian Gulf and the allied economic strangle-hold tightened around Saddam's neck.

Highly dependent on imports of food, medicine and spare parts, as well as exports of oil, the allied punch was hard and swift, affecting Saddam's warfighting sustainability as well as his troops' will to fight.

Overall coordination of the maritime interception forces fell to RADM William M. Fogarty, commander, MidEastFor. Under the U.N. guidelines, Fogarty and his staff laid plans to prevent trade with Iraq and Kuwait, except for supplies intended strictly for medical purposes and, in humanitarian circumstances, foodstuffs. An early alternative to war, Fogarty's forces soon captured the world's attention as they demonstrated the international rejection of Iraq's aggression against tiny Kuwait.

Left: USS *Goldsborough*, HMAS *Darwin* and HMS *Brazen* (F 91) surround the Iraqi tanker *Tadmur* in the North Arabian Sea prior to boarding for cargo inspection. Right: STG2 Robert Johnson mans a 25mm chain gun while STG3 Dan Gelaghty spots for his gunner aboard USS *Antietam* (CG 54).

Battle group and destroyer squadron commanders in the Red and North Arabian Seas controlled the operations directly as thousands of merchant vessels were tracked, challenged, identified, warned, then boarded and diverted if found in violation of sanction guidelines. The complexities of the mission kept sailors huddled around high-tech instrument displays throughout the Middle East, tracking each "skunk" until lookouts around the ships spotted the unidentified vessel.

Challenges began over radios aboard warships, P-3s flying maritime patrols, embarked helicopters or tactical aircraft flying combat air patrols, to identify the vessel, its point of origin, destination and cargo. Information from satellite imagery, radar, intelligence, shipboard computer data bases and public shipping records was used to corroborate ship ownership and other facts while masters were queried via radio. After determining the vessel was not a threat, not bound for a belligerent's border and not carrying war goods, the merchants were sent on their way.

From the first days of the maritime intercept mission, warships like USS *John L. Hall* (FFG 32), the first ship to challenge a merchant vessel, averaged 10 challenges daily — a process that became more determined following the approval of military force to ensure merchants complied with the sanctions.

Early on in the interception effort, some Iraqi merchant masters appeared as obstinate as their leader. On Aug. 18, 1990, two days after the interceptions began, the first shots of Operation *Desert Shield* were fired across the bow of an Iraqi tanker that refused to alter its course after being directed to do so by the guided-missile frigate USS *Reid* (FFG 30).

A short time later, *Bradley's* commanding officer, CDR Kevin J. Cosgriff, ordered three rounds fired from his 25mm chain gun to persuade the Iraqi tanker *Babr Gurgur's* master to divert his course. The shots ripped the surf in front of the merchant's bow but failed to convince the master, and *Bradley* followed the vessel throughout the night, handing it off to USS *Taylor* (FFG 50) in the Gulf of Oman.

As *Bradley* and *Taylor* followed their charge, a USS *England* (CG 22) boarding team became the first to climb over the side of a merchant vessel, the Chinese freighter *Heng Chung Hai*, for cargo and manifest inspection. After a short period at anchor in the Red Sea, *Heng Chung Hai* was allowed to proceed to Iraq. USS *Scott* (DDG 995) ordered the Cypriot merchant *Dongola* away from the port of Aqaba that same day after the vessel's master admitted carrying cargo bound for Iraq. The master complied without the need for a boarding in *Desert Shield's* first diversion.

England, *Scott* and *Bradley's* actions demonstrated the U.S. resolve to enforce sanctions from the very first days of the interception mission. "It was the sort of signal we wanted to send at that time," Cosgriff explained.

That signal became stronger Aug. 31 when a team from the cruiser USS *Biddle* (CG 34) boarded the first Iraqi merchant vessel



Photo by PH1(A/C) Scott M. Allen

as it headed for Aqaba, Jordan, from the Red Sea. U.S. personnel boarded the *Al Karamah* to inspect the manifest and holds for cargo that violated the U.N. sanction guidelines. A search found the vessel empty, and *Biddle* allowed *Al Karamah* to proceed.

In the early morning hours of Sept. 4, CAPT James A. Reid brought the crew of USS *Goldsborough* (DDG 20) to general quarters for the first seizure of an Iraqi vessel.

Tension-filled hours followed as a boarding team led by *Goldsborough's* newly-embarked Coast Guard law enforcement detachment (LEDet) — one of 10 Coast Guard interdiction units aboard Navy warships during *Desert Shield* — scaled the Basra-bound Iraqi merchant *Zanoobia's* accommodation ladder.

"The LEDet hadn't been aboard but a few minutes when we realized that the Coast Guard had corporate knowledge we needed badly," said LCDR David Paterson, *Goldsborough's* executive officer. Paterson acted as assistant boarding officer while Coast Guard LTJG John Gallagher led the way aboard the Iraqi merchant. The Coast Guard experts, seasoned by their experience in drug interdiction boardings, were essential in providing training to Navy boarding teams in Middle East waters.

Zanoobia's holds carried tea — enough to supply the entire population of Iraq for a month — and the Iraqi merchant was requested to divert his course to another port outside the Gulf. The master was unwilling to divert, and the decision was passed down the U.S. chain of command to take control of the ship.

Gallagher informed the master, and, after shouting defiantly, the Iraqi captain finally fell silent and relinquished control to the boarding team. "There was a conflict of wills there," Paterson said. "But we had the visible means of carrying out our will and he didn't. The nice thing was, we never had to resort to that."

Goldsborough crewmen were brought aboard to take *Zanoobia* to the port of Muscat, Oman, where Iraqi diplomats boarded and advised the master to return to his point of origin. Seaman David Lee Handshoe, who took over *Zanoobia's* helm, said his adrenalin



Photo by PHMA Craig Dietrich

was pumping as he steered for the Omani coast. "It's a little exciting to know that you're part of history," he said.

Gallagher and his LEDet team left *Goldsborough* to go aboard the frigate USS *Brewton* (FF 1086), where they participated in another historic encounter Sept. 14 — the first multinational boarding of an Iraqi vessel.

After 24 hours of radio negotiations with the master of the Iraqi tanker *Al Fao*, the Basra-bound merchant finally slowed in the Gulf of Oman after *Brewton* and the Australian frigate HMAS *Darwin* (F 04) fired warning shots across her bow. The boarding marked two other milestones — the first to follow warning shots and the first on the open sea in the dead of night.

Brewton commanding officer, CDR Craig Kennedy, brought his 278-man crew to battle stations after drawing within visual range of *Al Fao*. Constant communication up and down the U.S. and Australian chains of command kept military leaders apprised of the situation throughout the operation. When it became apparent *Al Fao* would not agree to stop, the decision was made to proceed to the next step in the interception procedure. One hundred .50-caliber rounds later, *Darwin* followed her American counterpart's lead with short bursts of fire ahead of the target. As *Al Fao* suddenly slowed, both warships launched their boarding teams.

A 13-man team of four Coast Guardsmen, five *Brewton* sailors and four Australians climbed more than 60 feet to the vessel's accommodation ladder and onto the tanker's main deck. A veteran of more than 500 drug interdiction boarding missions, Gallagher and his team explained that this boarding was tension-filled because of the measures taken to stop the vessel.

"Going through the boat was probably the most stressful part because you didn't know what was behind every door," said LEDet member Quartermaster 2nd Class James Lecomte, who led his Australian counterparts through the sweep of *Al Fao*'s holds. "We didn't know if it was going to be a regular boarding or if someone would be waiting for us." No one waited for them on the empty vessel, and *Al Fao* was sent on her way to Basra.

Brewton boarding team members echoed concerns about remaining alert during a boarding scenario to avoid an incident.

"We're not going over there to swing across signal halyards

Above: *Goldsborough*'s boarding team, led by members of an embarked Coast Guard law enforcement detachment, approaches the Iraqi freighter *Zanoobia* in the North Arabian Sea prior to seizure and diversion to its point of origin. **Right:** USS *Mississippi* boarding team members Coast Guard GMC John Hagy and Navy STG3(SW) Ed Yarborough conduct a cautious search aboard a merchant in the Red Sea.

with sabres in our teeth, to hack and slash until they stop, leaving a burning hulk," said QM1 Ken Shubick. "The 'powers that be' have gone to great lengths to have confidence in the knowledge that we're not an assault team."

"It's a touchy situation," said Machinist's Mate 1st Class Timothy Eckert. "The possibility of us moving Hussein's trigger finger is something that's on our minds at all times."

Warships in the North Arabian Sea soon quartered all shipping headed for ports in Kuwait or Iraq, leaving warships in the crowded Red Sea the busiest of the intercept force as vessels headed to Aqaba, Jordan, to try and offload Iraqi contraband for overland shipment. In all, 45 of the 51 merchant diversions through the first week of March were conducted in the Red Sea.

While Coast Guard LEDet teams and Navy personnel performed the bulk of merchant boardings, Navy SEALs and Marines boarded some vessels considered potentially dangerous due to their origins, the crews' attitudes or other circumstances.

At Christmas, intercepts neared 6,000, with 713 vessels already boarded by U.S. and multinational boarding teams. Tensions rose in the Gulf of Oman when an Iraqi merchant, *Ibn Khaldoun*, carried not only sugar, milk, spaghetti and tea en route for Umm Qasar, but also hosted nearly 250 passengers later identified as "peace activists" protesting the embargo of Iraq by trying to break through the "blockade" with prohibited cargo.

A boarding team of Marines and SEALs arrived via helicopter from the amphibious ships USS *Trenton* (LPD 14) and USS *Shreveport* (LPD 12) while a multinational boarding team of U.S. and Australian personnel from the destroyers USS *Oldendorf* (DD 972), USS *Fife* (DD 991) and HMAS *Sydney* (F 03) arrived via small boat to inspect the vessel's spaces.

The activists attempted to interfere with the boarding teams by

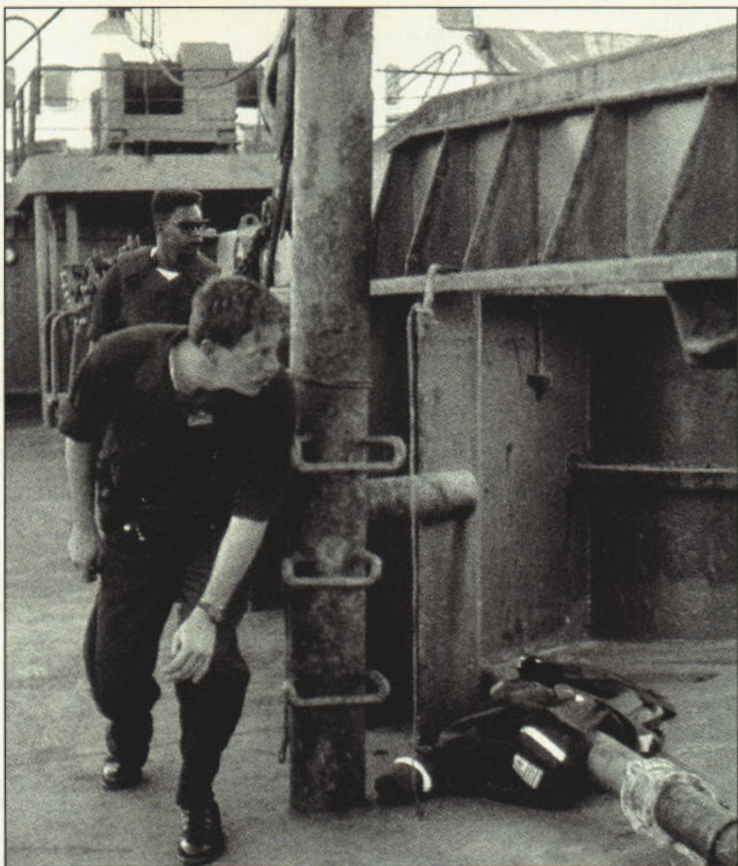


Photo by PA1 Chuck Kahlbach

forming a human chain to obstruct the team's passage. Team members fired shots into the air after several protesters grabbed for their weapons. Boarders also used smoke and noisemaker grenades for crowd control. No one was injured, but it marked the only time to date that boarders had fired their weapons. After inspectors located the prohibited cargo, the vessel that activists had dubbed the "peace ship" was escorted to Muscat, Oman.

The early and continued success of the maritime intercept force was a reminder of the effectiveness of surface forces, just by their presence, to maintain control of the sea. U.S. and allied naval blockades during the War of 1812, Civil War and World Wars I and II were key to isolating the enemy by cutting off supply lines. The 1962 quarantine during the Cuban missile crisis prevented deployment of Soviet ballistic missiles capable of striking key U.S. population centers and military sites.

The high degree of coordination exhibited by the multinational naval force in enforcing sanctions reflected years of peacetime training and cooperation between the United States and her allies. Building on the experience of Operation *Earnest Will* escort missions during the Iran-Iraq war, the Navy and coalition partners paved the way for success in *Desert Shield/Storm*.

The coalition's naval effort to stop Iraq's ocean lifeline of supplies and ability to interact in world markets assured there would be no resupply of war goods for the Iraqi army and no outflow of oil to supply Iraq with hard currency. Though not always an exciting, headline-grabbing mission, it proved highly-effective in keeping pressure on Saddam Hussein while solidifying the international coalition.

"The very quiet, very professional way [the Navy] put that embargo on — which continues to this day, out of sight, but very, very effective — may be one of the most important things we

did," said Gen. Merrill McPeak, U.S. Air Force chief of staff.

Saddam Hussein's lack of concern for his people's suffering was the greatest obstacle to effect an Iraqi withdrawal from Kuwait through the maritime embargo. The failure of a political solution through the first 177 days of Operation *Desert Shield* caused coalition leaders to add offensive operations to the menu of options being played out against Iraq.

The multinational maritime interception force continued its already demanding mission as the coalition's *Shield* transformed into a *Storm*, with the first volley of *Tomahawk* cruise missiles rocketing from shipboard launchers with a fiery belch. According to on-scene commanders, USS *San Jacinto* (CG 56) began the air war from the Red Sea with the combat launch of a *Tomahawk* in the first hours of Jan. 17. Minutes later, USS *Bunker Hill* (CG 52) led the Navy's *Tomahawk* assault against Iraqi targets from the Gulf.

While the air war raged on, maritime intercepts continued inside Middle East waters, especially the northern Red Sea, where cargo was meticulously inspected for Iraq-bound materials headed for Jordan, one of Iraq's strongest sympathizers throughout the crisis.

President Bush's halt of the ground assault Feb. 28 signified the end of hostilities for land and air forces, but the maritime interception force's demanding mission continued unabated to keep pressure on Iraq should the enemy's force pursue any further goals. As U.N. members haggled over terms of a permanent cease-fire in the Gulf and ships received their redeployment orders, the busy shipping lanes were flooded with merchants, still challenged by coalition warships in case Iraq tried to re-arm.

The U.N. passed relaxed restrictions on food to civilian groups in Iraq March 22, but food for the Iraqi military was still prohibited, complicating interception efforts. The committee authorized material related to food and medical supplies. Medicine, as it was from the beginning, was exempt from sanctions.

As shipping resumed its normal peacetime level, the now-smaller interception force adjusted its mission to allow the flow of non-prohibited material to Iraqi, Jordanian and Kuwaiti ports, while barring goods that could bolster Iraq's military machine.

"The evidence is clear that the naval enforcement of U.N. sanctions against Iraq was a major factor in demonstrating to the world that the allies could form an effective military coalition," said ADM David E. Jeremiah, Vice Chairman of the Joint Chiefs of Staff. "Even though hostilities are suspended, naval forces continue to enforce U.N. sanctions so that Iraq cannot reconstitute its armed forces."

Over a ten-month period, more than 165 ships from 14 allied nations challenged more than 10,000 merchant vessels, boarded nearly 1,500 merchants to inspect manifests and cargo holds and diverted 76 for violation of sanction guidelines through May 20. U.S. boarding teams conducted 685 of those boardings, with several conducted by combined U.S.-allied boarding teams.

Operations *Desert Shield/Storm* proved once again the value of a forward presence that had U.S. Navy ships on-scene and ready for any tasking the very day of the Iraqi invasion. As *Desert Storm* calms, that mission continues as always, with sailors acting diligently as the instrument of the United States' control of the seas. □

Hard Rain



Desert Storm *brings nasty weather*

Naval aviation soared smack into the eye of *Desert Storm* as Navy and Marine Corps pilots, aircrews and support personnel launched part of the most powerful and successful air assault in the history of modern warfare.

From "H-hour" Jan. 16 when the air campaign began, to the end of offensive combat operations 43 days later, gold-winged Navy and Marine aviators and their warbirds helped ensure the United States military and its coalition partners owned the skies over Iraq and Kuwait.

Screaming into the air from six carriers and various amphibious ships at sea, as well as ground bases and makeshift airstrips in the Saudi sands, Navy and Marine fixed- and rotary-wing aircraft were an integral part of the coalition's aerial effort to oust Saddam Hussein's forces from Kuwait and cripple Iraq's war-making capabilities.

Of the more than 112,000 sorties flown by coalition aircraft during the war with Iraq, Navy and Marine aircraft flew close to 38,000. Sea-service pilots flew 23 percent of the combat strike sorties which was in direct proportion to their numbers in the allied air inventory (Navy - 16 percent, Marine Corps - 7 percent).

More than 1,086 Navy and Marine Corps aircraft — including the Navy's F-14 *Tomcats*, F/A-18 *Hornets*, A-6 *Intruders* and the venerable A-7 *Corsairs*, as well as Marine Corps AV-8B *Harriers* and *Hornets* — joined the U.S. Air Force, Army and their coalition partners to knock out the eyes, ears and brains of the Iraqi military machine.

At around 3 a.m. (Gulf time) Jan. 17, the forces of the Iraqi military received a rude awakening courtesy of coalition bombs and missiles as Operation *Desert Shield* turned into a violent *Storm*.

In a blitz led by more than 100 *Tomahawk* cruise missiles fired from nine Navy ships in the Persian Gulf and Red Sea, wave after wave of coalition aircraft — including those flown by Navy and Marine pilots — began hammering strategic targets inside both Iraq and Kuwait, signaling the start of offensive combat operations.

After blinding the enemy's early warning systems with strikes by Navy and Marine EA-6B *Prowlers* and destroying critical radar sites with high-speed, anti-radiation missiles (HARMs) fired from Navy and Marine Corps tactical aircraft and Air Force



Photo by PH2 Charles W. Moore



Photo by LCDR Dave Parsons

Above: An F-14 *Tomcat* readies for launch aboard USS *John F. Kennedy*, one of six carriers serving during Operation *Desert Storm*. Left: Laser-guided bombs line *Kennedy*'s flight deck prior to loading aboard Iraq-bound A-6E *Intruders*. Opposite page: An A-7E *Corsair* from Light Attack Squadron 72, assigned to *Kennedy*'s embarked Carrier Air Wing 3, approaches Iraqi targets loaded with *Desert Storm*'s "hard rain" — Mk 82 500-pound bombs.

F-4 *Wild Weasels*, allied aircraft poured into Iraq and began bombing command and control centers, *Scud* missile launchers and nuclear, biological and chemical weapons factories and sites. The Navy-Marine Corps team launched more than 80 percent of the HARMs that cleared the way for coalition strike planes to attack.

In those early hours of the war, Navy and Marine pilots joined in the destruction of Iraq's air and naval forces, anti-air defenses, ballistic missile launchers, communications networks, electrical power facilities and more. Along with their allied partners they inflicted heavy military losses with precision bombing from high-tech aerial weaponry, while at the same time causing remarkably low civilian casualties.

This loud and resounding attack signaled the beginning of the end for the Iraqi occupation of Kuwait — a signal which reverberated off the decks of the aircraft carrier USS *Ranger* (CV 61). At H-hour, the "William Tell Overture" blared from every speaker aboard the carrier. The overture marked the first combat air strike launched in nearly 20 years from the San Diego-based aircraft carrier which earned 13 battle stars for service in Vietnam. That overture would be played day and night, more than 160 times, as *Ranger* and the pilots and crews of Carrier Air Wing 2 contributed 4,200 sorties during *Desert Storm*.

"It reminded 5,000 men that the war was continuing," said RADM R.J. Zlatoper, commander, Carrier Group 7. In all, more than 60 carrier-based squadrons were deployed for the war.

At the same time, on a land-based flightline in the Persian Gulf, more than 50 aircraft from Marine Aircraft Group 11 roared into the pre-dawn darkness en route to targets inside both Iraq and Kuwait. The "flying leathernecks" were the first Marines among many to strike.

"There was actually some disbelief [among some Marine pilots] that we were actually going to kick the thing off," said Maj. Dave F. Goold, executive officer of Marine Fighter-Attack Squadron (VMFA) 451 who flew in the first wave. "But once we crossed the border there was no doubt in anyone's mind."

After seeing the Baghdad skies filled with smoke and fire from allied strikes and hearing the sounds of jet-propelled freedom fighters, Saddam Hussein couldn't have doubted it either.

During the first three weeks of the air campaign, Navy and Marine Corps units contributed more than one-third of the 42,000 sorties flown.

The main Navy effort was mounted from six carriers operating in the Red Sea and Persian Gulf. USS *America* (CV 66) and USS *Theodore Roosevelt* (CVN 71) departed Norfolk Dec. 28, 1990, reaching Middle East waters just in time for the beginning of *Desert Storm*. The two joined USS *Midway* (CV 41), USS *Saratoga* (CV 60), USS *John F. Kennedy* (CV 67) and *Ranger* in the theater of operations.

E-2C *Hawkeyes* and S-3 *Vikings* screamed off catapults around-the-clock in concert with P-3C *Orions* and coalition airborne early warning aircraft (AWACs) to keep track of Iraq's fleet of tactical aircraft and provide air traffic control. Navy and Marine aircraft flew continuous combat air patrols to protect ships and



Photo by PH1(A/C) Scott M. Allen

Above: *Harrier* jump jets come in for a landing aboard *USS Nassau*. Right: An *F-14 Tomcat* catapults off *USS Independence* in the North Arabian Sea. Opposite page: Nose art on a *Corsair* aboard *USS John F. Kennedy* indicates the aircraft's "hits."



Photo by JO2(SW) Joe Bartlett

airfields, as well as provide reconnaissance and valuable training time. These aircraft, kept aloft by KA-6s, KC-130s, Air National Guard KC-135s and other coalition tankers, provided the Navy's initial punch of *Desert Storm*.

The U.S. Air Force also played a crucial role in refueling operations. Without the Air Force tankers, Navy and Marine Corps warplanes wouldn't have been able to hit targets deep in Iraq, said CDR William M. Lipsmeyer, requirements officer at the Naval Strike Warfare Center.

"Every single time the Air Force planned a certain amount of fuel to be at a certain spot in the air, it was there," Lipsmeyer added. "It was a credit to both the Air Force and the Navy-Marine team for them to work together so well."

While strike fighters and bombers were wreaking havoc, P-3C *Orions* and S-3 *Vikings* patrolled transit lanes throughout *Desert Shield/Storm*, while EP-3Es provided electronic reconnaissance.

While performing routine surface reconnaissance in the northern Persian Gulf Feb. 20, a *Viking* from Air Antisubmarine Squadron (VS) 32 became the first to engage and destroy a hostile vessel using high altitude bombing techniques when it "killed" an armed high-speed craft.

The *Vikings* of VS-32 launched from the deck of the *America* to monitor unknown contacts under the command of LCDR Bruce "Baja" Bole. Guided by the *Aegis* cruiser *USS Valley Forge* (CG 50), they searched with the S-3B's forward-looking infrared system and the new inverse synthetic aperture radar, pinpointed the craft's position and sank it.

The Marines, flying from bases on land and from ships,

brought 65 percent of their total aviation assets to *Desert Storm*, officials said, and added their own *Hornets*, *Harriers*, *Intruders*, *Prowlers*, OV-10 *Broncos* and KC-130 *Hercules* fixed-wing aircraft, as well as AH-1 *Cobra* attack helicopters, UH-1 *Hueys*, CH-46 *Sea Knights* and CH-53 *Sea Stallions* for rotary-wing support.

The Navy had a large helo contingent in the Gulf as well, using a variety of rotary-wing aircraft for search and rescue, medical evacuations (medevacs) and logistics. The war marked the first combat operations for the SH-60H *Seahawk* strike rescue helicopter, the Navy's newest helicopter which can perform medevacs, provide logistics support or deliver up to eight members of a sea-air-land (SEAL) team.

Together, the Navy-Marine pilots, crews and aviation support personnel helped give the United States and her coalition partners early and undisputed ownership of the air from 100 feet over the surface of Iraq and Kuwait to the stratosphere. Launching up to 140 sorties a day from their flight decks, the carriers and their battle groups contributed significantly to allied air dominance and effectively eliminated any Iraqi naval capability at sea.

"The kids down here on the deck did a great job getting this launch off," CAPT John P. Gay, *Kennedy's* commanding officer, said of flight crews after the first air strike. "They know it went

well, and they're pleased with themselves. They should be." The strikes marked the first time that Navy carriers have conducted combat operations from either the Red Sea or the Persian Gulf, both relatively narrow, restricted bodies of water heavily plied by commercial shipping.

Navy air warfare leaders said the performance of the nearly 30,000 Navy men and nearly 500 aircraft aboard the carriers in-theater was unparalleled, and their mission statistics were impressive. Navy sorties, both fixed- and rotary-wing, totaled nearly 20,000.

"I think this is the best crop of military professionals that this country has ever seen," said VADM Dick Dunleavy, assistant chief of naval operations for air warfare.

The Marines achieved similar success.

After flying four squadrons of F/A-18s, two squadrons of *Harriers*, one *Intruder* squadron and a squadron of 12 *Prowlers* nonstop across the Atlantic in the early days of *Desert Shield*, the Marines were ready to fly combat missions in less than 24 hours.

"When our pilots arrived they had missiles on board, and the guns were armed," said Lt. Gen. Duane A. Wills, deputy chief of staff for Marine aviation. "It was a success story from the start."

The 3rd Marine Air Wing (MAW) (Reinforced) provided the Marines' contribution to the allied air campaign as well their trademarked close-air support for Marines on the battlefield. Included in 3rd MAW's air ranks were 241 fixed-wing and 325 rotary-wing aircraft. The Marines flew more than 17,770 sorties; 11,844 were fixed-wing; 5,935 were rotary-wing. Marine pilots averaged more than 50 flight hours a month during "surge" operations and flew up to three sorties a day.

The mission of the allied air campaign was broken down into four phases, according to Air Force Chief of Staff Gen. Merrill McPeak. Phase one was to gain air superiority by destroying Iraq's strategic capabilities. That goal was accomplished within seven days. Phase two required the suppression of air defenses in the Kuwaiti Theater of Operations. During phase three, the air warriors continued to service phase one and two targets as needed, but also shifted emphasis to the field army in Kuwait. Finally, phase four entailed air support of ground operations.

Some of the most intense air action came during the first week of the war, when Navy-Marine aviators and other pilots were busy dismantling enemy defenses. Everything from enemy artillery positions to the aircraft of the sixth-largest air force in the world became prey for allied pilots. Flying in pre-designated 900 square-mile "kill boxes," many Navy-Marine Corps pilots got their first taste of combat during the war's first few days, while their high-tech mounts proved the versatility of today's air machines.

On "D-day," four Navy *Hornets* from Fighter/Attack Squadron 81, embarked aboard *Saratoga*, were on a bombing mission to an Iraqi airfield when they detected two Iraqi MiG-21s flying seven miles off their track.

Switching from their bombing profile to air-to-air combat, LCDR Mark Fox and LT Nick Mongillo downed both aircraft using *Sidewinder* and *Sparrow* missiles. Fox and Mongillo then continued on their mission to score direct bombing hits on the enemy airfield. They scored the Navy's only air-to-air kills in the

brief but decisive battle, while taking the *Hornet* through its dual-roled paces. All told, the coalition scored 35 air-to-air fixed-wing kills against Iraqi aircraft.

In fact, the Iraqi air force quickly went underground or flew to safe haven in neighboring Iran after going nose-to-nose with coalition airplanes and discovering the hard way what naval air power and other allied services could put into their cockpits.

Navy pilots from *Kennedy*, flying a daytime mission over southwestern Iraq early in the offensive, said that a group of MiGs stayed 40 or 50 miles away, falling back and refusing to engage each time the U.S. planes advanced.

"I don't think they wanted to die," said an F-14 pilot whose call sign is "Rake." "You think they would have a change of heart when you bomb the airfield they took off from, and you do it with impunity, but they just stayed away."

The allied air performance in the limited air-to-air battles prompted a joke among aviators. "The last words an Iraqi pilot wanted to hear were 'You're cleared for takeoff,'" said Wills. Marines did score one air-to-air kill during the war, when Capt. Charles J. Magill, an exchange pilot flying with the U.S. Air Force 33rd Tactical Fighter Wing, shot down an Iraqi MiG-29 Jan. 17. Marine aviators also devastated scores of Iraqi tanks, armored personnel carriers, trucks, bunkers, radar sites, artillery positions and other strategic targets.

During the first waves of attacks, the skies over Iraq were filled with intense barrages of anti-aircraft artillery (AAA) and missiles. HARMs launched by the Navy-Marine team in *Desert Storm* were key to "blinding" Iraqi AAA. The AAA and surface-to-air missiles (SAMs) which did get up were usually dodged by most allied pilots.

"I had three or four SAMs fired on me the first night," said Capt. John F. Marion, an F/A-18 pilot with VMFA-451. "It was a busy time. Intense, very intense."

Marion described the incoming SAMs and AAA as "red ropes" and a "wall of white and orange lights." Other pilots said the AAA looked like orange tennis balls going by the cockpit. "It was like a thousand flash bulbs going off around the plane," another pilot said.

While the Iraqi air defenses were, for the most part, ineffective, some AAA and SAM barrages did find allied air targets. On Jan. 18, Marine pilot Lt. Col. Clifford Acree and aerial observer



Photo by PH3 Paul Hawthorne

Warrant Officer 4 Guy Hunter were shot down over Iraq when a SAM struck their OV-10 *Bronco* reconnaissance plane.

Shortly after ejecting from the burning aircraft and landing near Iraqi trenches and fortifications, both injured Marines were taken prisoner. They were the first of five Marine aviators taken as POWs. One other OV-10 pilot and two *Harrier* pilots were also captured after being downed. All five were later repatriated.

The Navy had three aviators taken as prisoners of war. LT Jeffrey N. Zaun and LT Robert Wetzel were captured Jan. 18 when their A-6E *Intruder* was shot down over Iraqi territory. A third aviator, F-14 radar intercept officer LT Lawrence R. Slade, was also taken prisoner.

Slade's *Tomcat* was hit by a SAM Jan. 21 and thrown into an uncontrollable spin, forcing him and pilot LT Devon Jones to eject. Jones was rescued by a U.S. Air Force search and rescue helicopter, but Slade was captured and forced to appear on Iraqi television several days later. All three naval aviators were repatriated March 4 along with other allied POWs. Six sea service aviators were killed in action — four Navy and two Marine Corps.

By the end of *Desert Storm*'s third week, naval aviators had been largely responsible for the annihilation of the Iraqi navy. *Intruders* and *Hornets*, using ordnance including *Harpoon* missiles and *Skipper* and *Rockeye* bombs, sank or disabled many of the 41 missile gunboats, minesweepers, patrol craft and other small Iraqi ships destroyed by coalition forces. Several armed hovercraft were destroyed as well. *Silkworm* anti-ship missile sites were also leveled.

As the war progressed, the Navy-Marine team's mission changed. It moved from strategic and battlefield preparation to tactical targets and close-air support. Tanks, vehicles and artillery soon moved to the top of the target list, especially during the border incursions in and around the Saudi town of Khafji, Jan. 29, and the start of the ground campaign Feb. 24. Marine *Harriers*, *Hornets* and Navy and Marine *Intruders* quickly shifted from hitting pre-selected, stationary targets to striking roving quarry.

Harriers and *Cobra* attack helicopters performed much-needed close-air support missions during these operations and helped clear the way for the fast-moving 1st and 2nd Marine Divisions. Close-air support, with constant danger from small-arms fire, shoulder-fired missiles and possible "friendly fire," was not a new

mission for the A-6 or the *Cobra*, which saw action in Vietnam.

The AV-8B, on the other hand, saw its first sea-based combat action. Flying from the amphibious assault ships USS *Tarawa* (LHA 1) and USS *Nassau* (LHA 4) as well as from ground bases, the *Harrier* demonstrated the Navy-Marine Corps team's versatility and effectiveness, as did the OV-10 ashore.

Twelve *Broncos* crossed the Atlantic aboard *America* and *Roosevelt*. As the carriers entered the Mediterranean Sea, the *Broncos* flew off to finish their journey to Saudi Arabia — the first major launch of OV-10s from a carrier's flight deck.

Operation *Desert Storm* marked the first combat use of some of the Navy and Marine Corps' "latest and greatest" aircraft, among them the F-14A+, the F/A-18C and the F/A-18D night-attack aircraft.

The *Hornets* were the workhorses of both Navy and Marine

Corps aviation inventories. The Navy flew 4,435 sorties, and the Marines flew 5,047 sorties in the deadly, and highly durable fighter-attack aircraft. Navy pilots flew 4,071 sorties in their battle-proven, all-weather A-6 *Intruders*, with Marine pilots flying 854 sorties in their *Intruders*.

Navy helicopter operations were also vital to surveillance, search and rescue, mine countermeasures and combat missions.

Navy helicopter pilots, both ashore and at sea, logged more than 30,000 flight hours supporting these operations during Operation *Desert Storm*.

Because a wide variety of ordnance was used to match a weapon's ability to a specific target, Navy-Marine aviation units were put to the logistics test. Not counting missiles, allied air forces dropped nearly 88,500 tons of ordnance on the battlefield.

One Marine pilot described his return to base following a successful strike mission, and the flightline reception he received.

"It was pretty climactic for [the ground crews]," said Marine Capt. John G. Zuppan of VMFA-451. "When we pulled back into the lane with nothing on the aircraft but the [bombs'] electrical fuse wires hanging down, they were pumped up. They came over to the aircraft in swarms and gave us all a pat on the back and shook our hands. The whole five months of waiting had culminated.

"Every one of our pieces of ordnance came off, and every one blew up," he continued. "That's a credit to all the guys on the



Photo by CDR John C. Roach, USNR

Destroyed vehicles jam miles of desert highways after coalition aircraft stopped enemy attempts to flee Kuwait with arms and equipment.

ground. They worked their butts off for that moment."

At one point during the war there were so many targets available that pilots reported taking whatever ordnance was closest to their plane. Press reports noted that bomb-laden elevators on carriers could not climb to the flight deck fast enough to satisfy the fast-moving aviators.

"Our aviation supply system, maintenance programs and hardworking Marines on the ground were unbelievable," said Wills.

"It's teamwork that's really giving us the edge," said CDR Jim Andersen, commanding officer of Attack Squadron 35 embarked with *Saratoga* during the "surge days" of the air campaign. "Our maintenance people are delivering the jets when needed, and the air crews are delivering ordnance on target and on time."

Carrier aircraft wings were able to maintain 85 to 95 percent of their aircraft at a fully mission-capable status throughout Operations *Desert Shield/Storm*. Marine Corps readiness capabilities remained at more than 90 percent throughout the war and were better the day of the cease-fire than they were in CONUS before they deployed.

With the first deployment of two aviation logistics support ships — "floating garages" — the Marines could repair and replace parts, even entire airplane engines, while in Saudi Arabia.

Dunleavy said the readiness of naval air assets was remarkable. "In my day, during Vietnam, out of 10 aircraft in a squadron you were lucky to have six of them up and ready to go," he said. "Now it's a rare day if you have less than nine out of 10."

On Feb. 26, as the Iraqi army was fleeing from Kuwait, CAPT Ernest Christian Jr., *Ranger's* commanding officer, described the action in and around Kuwait City to his crew. It was a scene that typified the endless air attacks which, in the end, were largely responsible for winning this war.

"It looks like the Iraqis are moving out and we're hitting them hard," Christian said. "It's not going to take too many more days until there is nothing left of them."

Two days later, President George Bush called a halt to offensive combat operations. The allies had won the war, with air superiority playing a decisive role.

During the last full day of war, aviators of the six carrier battle groups flew 600 combat missions, reducing the remaining combat capability of Saddam's forces as the Iraqis fled from Kuwait.

"This was the road to Daytona Beach at spring break," said LT Brian Kasperbauer, a *Ranger* pilot, as he described the scores of armed Iraqis trying to escape on a Kuwait highway. Navy and Marine Corps aircraft helped end that escape.

Aviators placed the responsibility squarely on Saddam Hussein. "I feel pity for their guys only because of their leader, only because of the distaste I have for what he has done to his people and the needless sacrifice ... and for what?" asked CDR Frank Sweigart, another *Ranger* pilot.

The air war was, without question, crucial to the success of the ground assault. *Desert Storm* commander, Army Gen. H. Norman Schwarzkopf, said that at the outset, Iraq held a 2-to-1 advantage in fighting troops over coalition forces.

"It was necessary to reduce these forces down to a strength that made them weaker," he said, "particularly along the front line



Photo by PH1/AC Scott M. Allen

USS Independence (CV 62) ordnancemen lift a Sparrow missile to the its mounting bracket on the belly of an F-14 Tomcat during operations in the North Arabian Sea.

barrier that we had to go through." Weakening these forces was the job of the coalition air force, the general said. The job was not done, however, without a human price.

Eight naval aviators were killed in combat operations during Operation *Desert Storm*. Aircraft losses totaled 13; seven for the Marine Corps (five *Harriers* and two OV-10s), and six for the Navy (one F/A-18, one F-14 and four A-6s). More than 234 Iraqi aircraft were confirmed to have been taken out of the fight -- 90 were destroyed in combat operations, 137 fled to Iran and another 16 were captured by ground forces and six were non-combat losses.

McPeak said while the ground forces did what air power could never do — move in on the terrain and dictate terms to the enemy — it was his personal conviction that this was the first time in history that a field army had been defeated by air power. The lightning-quick disintegration of Iraqi air defense systems with such overwhelming power stunned the enemy, he said. In essence, the war was essentially over as soon as it started.

"They just ran into a buzz saw," McPeak said. "It's not that they were featherweight opponents, it's just that they picked on the wrong guy."

Desert Storm's hard rain, driven in large part by the Navy-Marine Corps aviation team, was a storm Saddam Hussein could not weather. Without it, Hussein's "mother of all battles" might have had a bloodier conclusion. □

Victory at sea



Darkness cloaked the warship in the pre-dawn stillness as water slipped past, churned by the ship's screws. Without warning, blazing fire erupted from sleek, menacing silhouettes, setting the horizon ablaze with a powerful pyrotechnic display. Seconds after enemy lookouts spotted the horizon's mesmerizing light show, the high-explosive thunder and lightning of Operation *Desert Storm* struck with a terrifying force.

As the media centered on forces in the air and on the ground, the Navy-Marine Corps team at sea played a crucial role in the liberation of Kuwait. While continuing high-tempo maritime intercepts, U.S. warships conducted a variety of contingency actions, from *Tomahawk* launches to naval gunfire support.

Like shadows from the past, the battleships USS *Wisconsin* (BB 64) and USS *Missouri* (BB 63) positioned themselves again in harm's way. With their historic symbols of naval firepower, the 16-inch guns and modern weapons including *Tomahawk* cruise missiles, the battleships acted as the centerpiece of the Navy's seapower to eject Iraqi forces from Kuwait.

That force of up to 115 U.S. and 50 allied warships had cut

Saddam's economic lifeline during the five-month-old maritime intercept mission by Jan. 17, when the *Shield* turned into a *Storm*.

"Gentlemen, we are ready," said CAPT David S. Bill III, *Wisconsin* commanding officer, over the ship's 1MC. "I have no doubt that you are on the winning team." Bill's remarks were greeted by cheers from *Wisconsin* crewmen who were quickly overtaken by a more somber mood.

Following President Bush's order to "destroy Saddam Hussein's offensive military capabilities," fire control technicians aboard USS *San Jacinto* (CG 56) fired the first *Tomahawk* missile toward Iraq from her Red Sea position, with USS *Bunker Hill* (CG 52) following suit moments later from the Persian Gulf. It was a historic moment soon duplicated 100 times aboard seven other U.S. ships during *Desert Storm*'s first day.

The attack was the first use of the *Tomahawk* during wartime. Within sight of *Wisconsin*'s bridge, missiles rose like giant flares from other ships in the area, including her sister ship *Missouri*. *Wisconsin* served as the *Tomahawk* strike warfare commander for the Persian Gulf, directing the sequence of *Tomahawk* launches



USS *Wisconsin* fires a *Tomahawk* cruise missile against an Iraqi target, one of 24 *Tomahawks* launched by the dreadnought during the first two days of *Desert Storm*.

that marked the opening of Operation *Desert Storm*. She fired a total of 24 *Tomahawks* during the first two days of the campaign.

The coalition effort on the surface made its impact early, when USS *Nicholas* (FFG 47) and the Kuwaiti fast-attack craft *Istiqlal* (P 5702) conducted the first surface engagement of the war. Acting in support of combat search and rescue for the furious air campaign Jan. 17, *Nicholas* and her helicopters scouted the Dorrah oil field, about 40 miles off the Kuwait coast. Nine of Dorrah's 11 oil platforms were believed to be occupied by Iraqis, who were using them as observation posts to follow U.S. and allied aircraft and ship movements.

In a daring night operation, well within range of Iraqi *Silkworm* missiles and near Iraqi combatant ships and aircraft armed with *Exocet* ship-killer missiles, *Nicholas* and *Istiqlal* attacked the enemy positions.

Using tactics dating to the days of sail, CDR Dennis G. Morral, *Nicholas*' commanding officer, brought his ship within a mile of the southern platforms under cover of darkness.

Armed for air-to-surface combat, SH-60 *Seahawk* helicopters from Helicopter Anti-submarine Squadron (Light) 44, Detachment 8, joined by embarked Army helicopters, headed toward the north — the enemy's "back door." Once in range, they launched a volley of precision-guided rockets that destroyed enemy positions on the two northernmost platforms. Seconds later, stock-piled ammunition exploded, illuminating the night sky.

With the ship steaming under total emissions control and darkened, *Nicholas* and her Kuwaiti counterpart came within range of their objectives. While Iraqis on the other platforms were staring at their neighbors' flaming fortifications, the ships opened fire, quickly destroying the remaining platforms' bunkers.

"At this point, I determined that some of the Iraqis wanted to surrender," Morral said. An Arabic-speaking crewman called out over the ship's loudspeaker that anyone who wished to surrender should raise his hand. A black-and-white monitor in *Nicholas*' combat information center displayed a flickering infrared image of an Iraqi waving weakly. Hours later, the first 23 enemy prisoners of war (EPWs) were recovered as teams boarded the

platforms to destroy the remaining fortifications. Five Iraqis were killed during the engagement.

"I don't think they wanted to fight," Morral said after meeting with the EPWs — hastily-drafted Iraqi reservists who had been forced to sit on the platforms without adequate food and supplies. "I think they were very relieved we were rescuing them from this situation. ... They were hours, if not minutes, away from dying when we brought them aboard."

Nicholas' relatively low-tech victory contrasted the high-tech hailstorm of sea-launched *Tomahawks* during the opening days of *Desert Storm* — a storm that the submarine force also contributed to Jan. 19, with the first-ever combat-launched *Tomahawk* erupting from a submerged USS *Louisville* (SSN 724) in the Red Sea. By the end of the operation's second day, Navy ships in the Middle East had launched a total of 216 *Tomahawks*.

As Navy A-6 *Intruders* pounded Iraqi minelayers Jan. 22, *Nicholas* and her *Seahawks* were busy again in the northern Persian Gulf. As the northernmost allied ship, *Nicholas* again launched her helicopters to attack Iraqi patrol boats operating less than a mile from the Kuwaiti coast. In the battle that followed, *Seahawk* gunners sank or heavily damaged four enemy craft.

Navy air power struck again Jan. 24, when *Intruders* destroyed an enemy minelayer, minesweeper and another patrol boat. An additional minesweeper was sunk after hitting one of its own mines while attempting to evade the aircraft's fire. Near Qurah Island, embarked Army helicopters from USS *Curts* (FFG 38) pulled 22 enemy prisoners from the sea. As the helicopters assisted the survivors, Iraqis on Qurah fired at the rescuers.

Aboard *Curts*, life had been a tightrope between danger and triumph since the Persian Gulf war began. Steaming the waters where her look-alike, USS *Stark* (FFG 31), had lost 37 sailors to an Iraqi missile strike four years before, CDR Glen Montgomery ordered his crew of 250 to general quarters any time an unidentified aircraft closed his position. "The *Stark* probably nags in the back of any commanding officer's mind," he said. "I'd rather give these 250 youngsters I'm responsible for a fighting chance."

His crew got that chance as the helicopters returned the enemy's fire. Montgomery brought *Curts* closer and trained the frigate's guns ashore, beginning an intense six-hour struggle to retake the first parcel of Kuwait territory. Enemy gunfire soon ceased; three Iraqis lay dead and 29 others knelt in surrender. Navy SEALs from Naval Special Warfare Group 1 landed on Qurah aboard helicopters from USS *Leftwich* (DDG 984). The island was reclaimed, and 51 EPWs were taken into custody.

Hours later, a *Curts* crewman planted the Kuwaiti flag on the newly-reclaimed island. "The high point for me was when I saw the Kuwaiti flag flying over its own territory," Montgomery said.

As Iraq mounted a three-pronged raid across the Kuwait border near Al Wafra and Khafji, Saudi Arabia, the ships of Amphibious Ready Group (ARG) Alfa — USS *Okinawa* (LPH 3),

Photo by John R. McCutchen/San Diego Union

USS *Ogden* (LPD 5), USS *Fort McHenry* (LSD 43), USS *Cayuga* (LST 1186) and USS *Durham* (LKA 114) — together with embarked Marines from the 13th Marine Expeditionary Unit (MEU), steamed near the Kuwaiti island Umm al Maradim Jan. 29. Marines from *Okinawa* assaulted the tiny island 12 miles off the Kuwaiti coast using embarked helicopters, liberating the second Kuwaiti island. After destroying weapons stored on the island, Marines raised the Kuwaiti flag over the second parcel of reclaimed territory.

By Feb. 2, senior commanders concluded that all Iraqi craft capable of delivering missiles had been destroyed, and the Iraqi naval force was considered combat ineffective. It was time for the Navy to move in close and pound Iraqi positions ashore. The best-equipped ships for that mission made their way north through the mine-infested coastal waters off Kuwait.

Curts, using advanced mine-avoidance sonar in darkness, led *Missouri* past unlighted navigational hazards to provide Iraqi forces with one-ton wake-up calls. Just off the coast, *Missouri* gun crews sent eight 2,700-pound shells crashing into an Iraqi command and control bunker near the Saudi border used by the enemy to coordinate the border incursions. It was the first time her 16-inch guns had fired in combat since March 25, 1953. Gun crews returned to action Feb. 5, silencing an Iraqi artillery battery in Kuwait with another 10 rounds. Over a three-day period, *Missouri* showered Iraqi strongholds with 112 16-inch shells.

Wisconsin, escorted by *Nicholas*, relieved *Missouri* on the gun line Feb. 6, answering her first call for gunfire support since March 1952. The battleship's left gun of turret two sent 11 shells across 19 miles of space to obliterate an Iraqi artillery battery in southern Kuwait.

Using a remotely piloted vehicle (RPV) as a spotter in combat for the first time, 50 more *Wisconsin* shells pounded Iraqi targets along the Kuwaiti coast, smashing Iraqi boats moored in a Kuwaiti marina that were used during raids against the Saudi coast. Her turrets boomed again Feb. 8, blasting bunkers and artillery sites near Khafji after the Iraqis were ousted by Saudi and Qatari armor.

The two battleships alternated positions on the gun line, using their famed 16-inch guns to destroy enemy targets and soften enemy defenses for a possible amphibious assault.

Through Feb. 14, when Joint Staff Chief of Operations, Army Lt. Gen. Thomas Kelly, described Iraq's military situation as "precarious," Navy surface ships, submarines and aircraft had dealt crushing blows to the enemy in concert with their coalition counterparts. But Iraq had a silent and deadly ally in the sea — mines.

Stress came from many sources as the U.S. Mine Countermeasures Group (USMCmG) under CAPT David J. Grieve, worked to clear the northern waterways for naval gunfire support

and a possible amphibious landing. Soon after the Iraqi invasion, mine sighting reports filtered in from the northern Persian Gulf, with U.S. ships discovering and destroying six mines during December.

The Navy sent her tried and true wooden ships — the Naval Reserve minesweepers USS *Adroit* (MSO 509), USS *Impervious* (MSO 449) and USS *Leader* (MSO 490) along with the newly commissioned mine countermeasures ship USS *Avenger* (MCM 1) — to the Gulf aboard the heavy-lift ship *Super Servant III* to arm the allies with the latest in mine detection equipment. An explosive ordnance disposal (EOD) detachment was also deployed to the mine countermeasures force. With allied minesweepers, the "iron men on wooden ships" and the six MH-53 *Super Stallions* of Mine Countermeasures Helicopter Squadron 14 set out to clear the waterways to Kuwait, aided by 20 EOD teams embarked in other U.S. warships in the area.

After months of training off Dubai, United Arab Emirates, USMCmG staff embarked in USS *Tripoli* (LPH 10) Jan. 20, and proceeded to the northern waters to perform their mission — clear a pathway to the beach.

As flagship for the operation, *Tripoli's* flight deck was used as a base for the *Super Stallions* which dragged countermeasures sleds to locate and rip the enemy's buoyant weapons from their moorings for destruction by divers or machine gun. Six British minesweepers joined their four U.S. counterparts in support, with

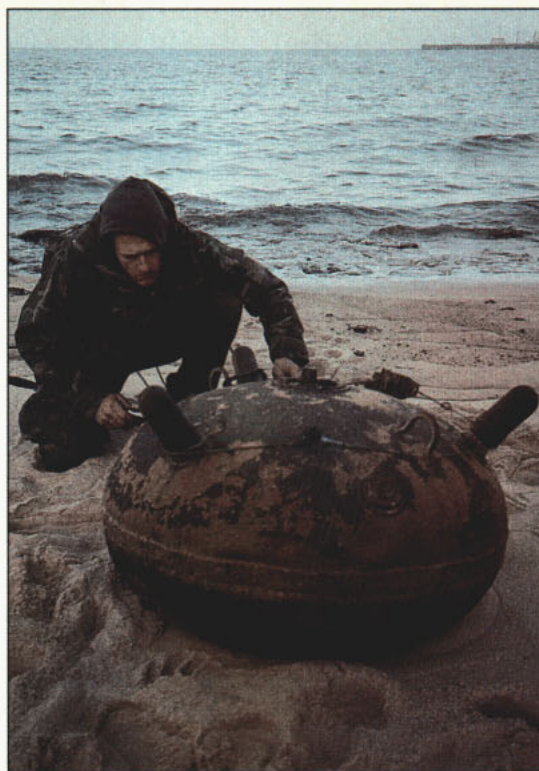
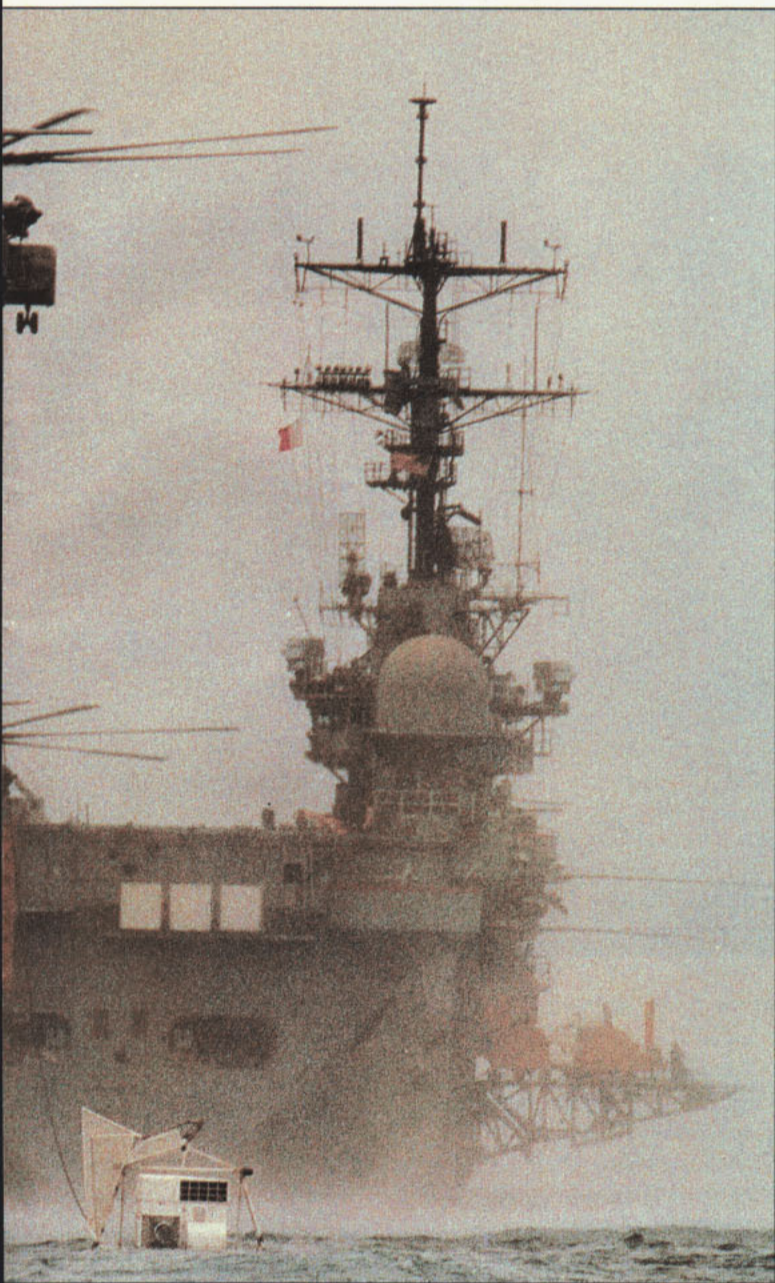


Photo by CWO2 Ed Bailey





An MH-53 *Sea Stallion* helicopter pulls a minesweeping sled behind USS *Tripoli* in the northern Persian Gulf. Opposite page: MM2 Roy Hunt of EOD Detachment 6 prepares to deactivate an Iraqi contact mine after it washed ashore on the Kuwaiti coastline.

Avenger surrounded their mother ship while *Adroit* led the salvage tug USS *Beaufort* (ATS 2) toward *Princeton*.

"When we hit the mine, we first sat right at the site, which is the natural response when you hit a mine — you anchor," said LCDR Jim Pereira, USMCmG staff officer. "When you find yourself in a minefield, you're going to hold your position until you can find a safe way out."

Although *Tripoli* was able to continue her mission for several days, she soon headed to Bahrain for repairs after being relieved by USS *LaSalle* (AGF 3) and USS *New Orleans* (LPH 11). *New Orleans* acted as the helicopter mother ship while the mine group staff moved aboard *LaSalle*.

Charts and intelligence from Iraqi sources showed that the mine field where *Tripoli* was hit was one of six laid by Iraqi vessels in a 150-mile arc from Faylaka Island to the Saudi-Kuwaiti border. Within that arc, an additional four mine lines were laid — a total of more than 1,200 mines meant to stop an allied advance from the sea.

Three days after the mine strikes, the massive 33-ship amphibious task force moved further north to assist in battlefield preparation as the deadline for the ground offensive neared. *Wisconsin* and *Missouri* steamed to the recently-cleared Point Foxtrot, their gun crews continuing to pound Iraqi targets. Marine AV-8B *Harriers* screamed off USS *Tarawa* (LHA 1) and USS *Nassau* (LHA 4) to add to *Desert Storm's* thunder — the first time the jump jets were used in combat off Navy flight decks.

The night before the Feb. 24 ground offensive crashed through the berms separating Iraq and Kuwait from Saudi Arabia, *Missouri* trained her guns on Faylaka Island in a pyrotechnic display that convinced Iraqi troops that the sea-borne invasion was at hand. *Wisconsin*, accompanied by USS *McInerney* (FFG 8) for air and mine defense, moved closer to drive that point further.

Twenty-four hours into the final phase of *Desert Storm*, Iraqis manning the Kuwait *Silkworm* missile sites fired two ship-killers against *Missouri*. The first landed harmlessly between *Missouri* and USS *Jarrett* (FFG 33). The second, headed straight for its large target, was intercepted by two *Sea Dart* missiles from the British warship HMS *Gloucester* (D 96).

"For the close proximity you have here, it's only a matter of a minute and a few seconds before that missile is on you," Pereira said. "That is extremely rapid reaction time for *Gloucester* to have gotten off those shots that she did to take out that *Silkworm*." Navy aircraft quickly destroyed the *Silkworm* site.

Had the ground offensive moved more slowly, USMCmG assets would have been able to sweep the waters closer to shore to create a safer area for naval gunfire support by the battleships. Calls for gunfire support were coming in rapidly from deeper inside Kuwait, and CAPT Bill moved *Wisconsin* through unswept waters to keep up with the requests.

With the allied ground force plowing through hordes of Iraqi

British and U.S. warships providing air defense along with allied air power. EOD teams embarked throughout the force, including those aboard *Wisconsin* and *Missouri*, were tasked with destroying the mines.

With an invasion date set, USMCmG began its work 60 miles east of the Kuwaiti coastline. As allied aircraft flew overhead to detect any threats to the group, the mine-clearing task force spent the first weeks of *Desert Storm* pushing 24 miles to "Point Foxtrot," a 10-mile by 3.5-mile box which became the battleship gunfire support area.

While sweeping further toward shore, the task group was "painted" by Iraqi fire control radar at *Silkworm* missile sites inside Kuwait. Task force ships moved out of range and triangulated the following radar to detect the site's position. It was during these maneuvers Feb. 18 that disaster struck.

Within three hours of each other, *Tripoli* and USS *Princeton* (CG 59) were rocked by exploding mines. As damage control teams struggled to save their ships, *Impervious*, *Leader* and

defenders, Iraqi forces on the Kuwaiti coastline prepared a counter-attack. To diffuse this possibility, VADM Stanley Arthur, commander of *Desert Storm's* naval forces aboard the flagship USS *Blue Ridge* (LCC 19), ordered Marines from USS *Guam* (LPH 9) and other ships of the amphibious task force to keep the enemy wary of an amphibious assault 50 hours into *Desert Storm's* land campaign.

Guam's helicopters conducted early-morning strike missions on both Faylaka and Bubiyan Islands. *Okinawa* conducted a simulated helicopter assault against Kuwaiti beaches, turning back after drawing small arms and anti-aircraft artillery fire from the enemy's bunkers. The maneuvers held the 80,000 defenders' attention toward the sea as the coalition's "end run" swarmed over their flank. By the time the enemy realized an amphibious assault was not headed their way, it was too late.

Wisconsin and *Missouri's* guns continued their fiery reports, with both battleships passing the million-pound mark of delivered ordnance on Iraqi targets by the time President Bush ended hostilities Feb. 28. With one last fiery salvo, *Wisconsin* fired the last naval gunfire support mission of the war.

Though the cease-fire ended ground hostilities, the Navy's mission didn't slow. Warships continued working with allied counterparts in enforcing sanctions through maritime intercepts.

Both battleships' RPVs combed the coastline and outlying islands in reconnaissance support for occupying allied forces. Over Faylaka Island, *Missouri's* RPV observed hundreds of Iraqi soldiers waving white flags following the battleship's pounding of their trench lines — the first-ever surrender of enemy troops to an unmanned aircraft. But victory at sea was far from complete, with only 125 Iraqi mines destroyed to date.

Sea service warriors kept a vigilant watch following the cease-fire, and after *Missouri's* RPV discovered enemy troops on Faylaka, Col. John Rhodes, commanding officer of the 13th MEU, led his ARG Alfa Marines to accept the surrender of more than 1,400 EPWs.

Okinawa and *Ogden* moved through mine-infested waters with their escorts to conduct the operation as AH-1 *Super Cobra* assault helicopters escorted CH-46 *Sea Knight* and CH-53 *Sea Stallion* helicopters from Marine Medium Helicopter Squadron 164 to Faylaka. With the *Cobras* providing a sharpeye above, and helicopters equipped with loudspeakers delivering instructions for surrender to the Iraqis throughout the operation, Marines served as the lead element to land on Faylaka Island, providing security for the landing zone and EPW processing area.

For seven hours, U.S. helicopters ferried 1,400 tired and hungry Iraqis to *Ogden*, where they were fed and given medical treatment prior to transfer to Saudi Arabia. "One thanked me and thanked George Bush, saying that Iraqis love America and Saddam Hussein is crazy," said Corporal Murray E. Thille.

"The general and senior officers were very professional in their actions and appearance," Rhodes said. "He [the general] offered his rank insignia to me, but I told him to put them back on and that he and the other senior officers would be immediately escorted to our ships."

As the EPW processing continued, Kuwaiti Navy Capt. Abdullah al Shuaib, a Faylaka native, pointed to a vandalized home



in the center of town. "This is my house," he said. "My family lived here, and my father was the mayor before the Iraqis came." Al Shuaib climbed the roof of his home and hoisted the Kuwaiti flag during a ceremony officially returning Faylaka, the last parcel of Iraqi-occupied territory, to the Kuwaiti government.

As *Wisconsin* redeployed for home March 6, the mine-clearing effort continued unabated. By the time the cease-fire was called, the job of reaching the port of Ash Shuaibah — originally targeted for an amphibious invasion — was nearly complete.

Ash Shuaibah occupiers welcomed *LaSalle's* arrival March 12, after assisting the British minesweeper HMS *Cattistock* (M 31) in escorting two tankers filled with fresh water and supplies through a channel to the newly-liberated Kuwait. But even as *LaSalle* moored to a grateful Kuwaiti welcome, USMCMG assets were busy sweeping channels into other Kuwaiti ports.

"The Iraqis might have agreed to a cease-fire, but their mines have not yet surrendered," said RADM Raynor A.K. Taylor, Middle East Force commander aboard *LaSalle*. "There are lots of them out there."

Complicating the sweeping operation was the huge oil slick Iraqi forces spilled into the Gulf that hampered mine-sighting efforts and complicated the work of EOD divers. By mid-March, more than 220 mines had been destroyed by the coalition force.

Iraq was known to have 11 types of sea mines. The bulk of these were replicas of pre-World War I-vintage Soviet contact mines, but their inventory also included high-tech magnetic and acoustic mines designed by Italy and the Soviet Union.

Until *Princeton* was battered by influence mines, allied forces



Photo by Santiago Lyon/Reuters

Left: Iraq's belief in a massive amphibious assault is graphically depicted on a giant sand table map of the Kuwaiti coast found inside a school building. Below: Burning oil spilling from the Sea Island pipeline terminal sends tons of thick smoke billowing into the Kuwaiti skies.



Photo by PH1 Richard J. Oneaz

relieve *New Orleans* as flagship for allied mine-clearing operations. Twenty-one minesweeping ships from six coalition countries scoured the Kuwait coastline and northern Persian Gulf to rid the waters of Iraq's silent partners.

By April 11, the day the U.N. Security Council declared the end of the Persian Gulf war following Iraq's acceptance of cease-fire terms, coalition divers and minesweeping forces had located and destroyed 553 of Iraq's more than 1,200 mines and had eliminated another 450 by May 20.

"I am extremely proud of the professional performance of our Navy and Marine Corps personnel who participated in Operations *Desert Shield/Storm*," Arthur said April 24, prior to beginning the 7,000-mile return voyage to *Blue Ridge's* forward-deployed homeport of Yokosuka, Japan. "We have accomplished our mission, but I can assure you that you will continue to see a U.S. Navy presence in the Arabian Gulf for years to come as a symbol of our country's support for this vital region of the world."

The sailors of the '90s, from the deck seaman to the bow lookout, from the EOD diver to the battle-proven captain, proved how quickly and assuredly the U.S. Navy could respond to a heinous act of aggression during *Desert Shield*, and how soundly they could defeat an enemy force during *Desert Storm*.

With the desert's *Storm* ebbing, the surface Navy's mission continues inside the Persian Gulf as it has for more than 41 years. Each sailor aboard the more than 165 U.S. ships that served in Middle East waters during the nine months of *Desert Shield/Storm* played an integral part in the coalition victory. Those who remain on station and continue to scour the skies, surface and depths for remaining hazards and threats to a secure peace in the region, do so knowing their role could suddenly put them in harm's way once again, as sailors and Marines have done so often in the past. □

had discovered only contact-type mines floating free in transit lanes or moored by cables just below the surface. These new additions to the Persian Gulf joined mines still left undetected that were laid by both Iran and Iraq during their eight-year war.

Avenger, the Navy's newest mine countermeasures ship, detected, classified and marked a bottom-influence mine Feb. 27, similar to the two that rocked *Princeton* nine days earlier. Divers from EOD Mobile Unit 6 dove on the contact, placed neutralizing charges and detonated the mine — the first bottom influence mine ever found intact during combat, and living proof that U.S. technology could deal with the invisible menace. *Avenger* located five additional influence mines during the week of April 18.

"I'm not aware of any mining effort of this scale since the Korean War," Grieve said. "They are extremely cheap and very effective. That's one of the reasons minesweeping forces are important. Look at what you can tie up or deny based upon a very old technology and a very simple weapon."

As of March 14, the day Sheikh Jaber Ahmad al-Sabah, Kuwait's Emir, returned to his home after a seven-month exile, more than 70 U.S. ships remained in the Persian Gulf, Gulf of Oman and Red Sea. Mine clearing efforts and maritime intercepts continued at a feverish pace, with USS *Biddle* (CG 34) participating in the coalition's 1,000th boarding of a merchant vessel since the operation began in early August.

With battle damage repair crews from USS *Jason* (AR 8) completing six month's worth of work in 30 days, *Tripoli*, sporting a five-foot mock bandage on her previously damaged hull, reported back to the northern Gulf in the first week of April to

Mother of all surrenders

Marines lead the charge from Khafji to Kuwait

When coalition air forces unleashed the thunder and lightning of Operation *Desert Storm* against Iraq Jan. 16, Marines of the 1st Marine Expeditionary Force (MEF) started to "lock and load."

Elements of the more than 36,000-strong 1st and 2nd Marine Divisions moved north toward the Kuwaiti border in preparation for the expected start of ground combat.

Meanwhile, units of the 1st Force Service Support Group (FSSG) maintained the "forward feed" — the enormous quantity of parts, supplies, fuel, food, water and ammunition necessary to sustain the fast-moving Marine machine.

Out in the waters of the Persian Gulf, Marine amphibious forces of the 4th and 5th Marine Expeditionary Brigades (MEBs) and the 13th Marine Expeditionary Unit (MEU) (Special Operations Capable) were busy keeping Saddam Hussein's commanders off-guard with amphibious exercises and presence off the coast of Kuwait.

After more than five months, the Marines, at last, were on the move.

While the ground war did not officially begin until Feb. 24, for the Marines, the land battle began the evening of Jan. 29. That night, Iraqi tanks and infantry units suddenly, and unexpectedly, burst into northeastern Saudi Arabia during a three-pronged attack along a 50-mile front. In what one Marine officer described as a "hellacious" battlefield, four battalion-strong Iraqi "probes" punched through the border at three points stretching from Khafji, in Saudi Arabia, to the Kuwaiti town of Umm Hujul.

U.S. military commanders speculated that the Iraqis had decided to go on the offensive after suffering three nights of continuous Marine artillery raids all along the Saudi-Kuwaiti border.

The Iraqi attacks were, for the most part, beaten back by a barrage of Marine artillery fire, tube-launched optically-guided, wire-controlled (TOW) anti-tank missiles and a hail of missiles, rocket fire and cluster bombs unleashed by A-10 *Warthogs*, AV-8B *Harriers*, A-6 *Intruders* and AH-1 *Cobra* attack helicopters.

Columns of Soviet-built T-55 and T-62 tanks and Iraqi armored personnel carriers were either destroyed or driven back across Kuwait's border in these first quick but bloody ground battles. However, the routs were not inflicted without a price. Twelve Marines became the first to fight and die in ground combat action in Operation *Desert Storm*.

During the first hours of these border clashes, seven Marines were killed when their light armored vehicle (LAV) was hit by a misdirected *Maverick* missile from an American warplane. Four others were killed by enemy fire. The Marines from the 1st Light Armored Infantry Battalion were the main repelling force during the border incursions, courageously taking on Iraqi tanks with their LAVs. Soon after, another Marine was killed in a separate "friendly fire" incident.

In Khafji, an undefended and deserted seaside town which

Iraqi forces occupied for less than two days, two six-man Marine reconnaissance teams spent 36 harrowing hours trapped inside an abandoned hotel after the Iraqis briefly captured the city.

The Marines, who had rigged the staircase of their position with anti-personnel mines and were ready to fight it out if discovered, spent their "captivity" calling in artillery strikes on nearby Iraqi armor and sending intelligence reports to coalition forces. At one point, Iraqis were on the ground floor of the Marines' hideaway.

Dodging and out-foxing the enemy for nearly two days, the recon leather-necks were extracted after Saudi and Qatari forces, supported by Marine artillery and air, mounted a counterattack and forced the Iraqis back into Kuwait. During the rescue, 19 Saudi and Qatari soldiers were killed and another 36 were wounded.

During the fierce fighting in Khafji, another Marine patrol attempted a

daring rescue of two Army soldiers who apparently found themselves caught in the middle of the fighting.

Media pool reports stated that Staff Sgt. Don Gallagher leaped out of his patrol vehicle as a pair of Marine *Cobra* gunships roared overhead and dashed around the abandoned Army truck yelling, "U.S. Marines, U.S. Marines," in hopes that his Army colleagues were still in the area. Even though the wheels of the overturned truck were still spinning when Gallagher arrived, the soldiers were nowhere to be found. It was later learned that Army Specialists Melissa Rathbun-Nealy, who became the first woman POW, and David Lockett had been captured by the enemy.

At that moment, the rescue team spotted two Soviet-made armored personnel carriers across the street. The *Cobra* gunships slipped into the village at powerline level and fired TOW anti-tank missiles at the two BMPs, destroying one.

Looking back, Army Gen. H. Norman Schwarzkopf noted the



Photo by PH1/AD Scott M. Allen



U.S. Marine Corps Photo

Above: Leathernecks from the 1st MEF move men and machines across the sands of Saudi Arabia. Right: Arrows depict the Marines' multiple thrust into Kuwait during the ground campaign. Prior to the invasion, both divisions shifted 50 miles northeast without being detected.

brief Iraqi capture of the undefended town of Khafji was "about as significant as a mosquito on an elephant."

In the battles in and around Khafji, Marines and their coalition partners served early and deadly notice to the Iraqi army which had been described as "elite," "battle-hardened" and ranked as the fourth-largest in the world. It was also a chance for the Marines to flex their well-trained muscles.

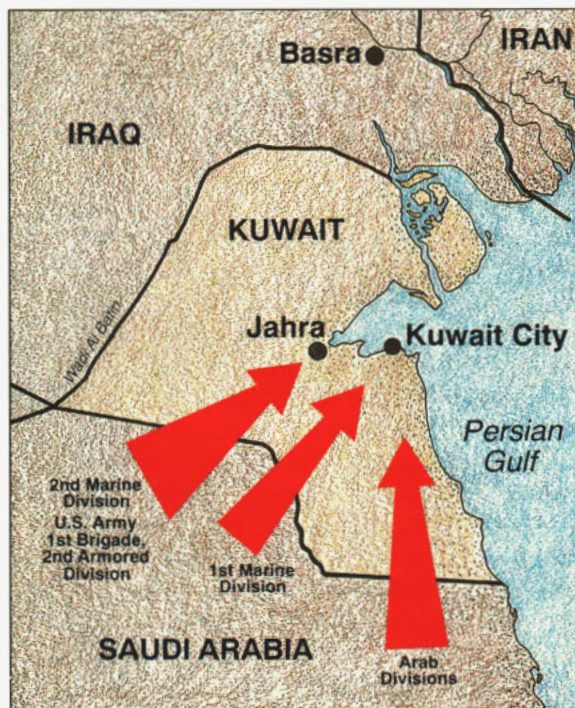
"It felt good, real good," Capt. Bill Wainwright told DoD pool reporters after a night of calling in Air Force and Marine air strikes against the Iraqis in Khafji.

It was a powerful prelude of things to come. In their first real battle with *Desert Storm* forces, the Iraqis suffered heavy casualties and lost at least 24 tanks and scores of other vehicles.

Lt. Col. Dick White told reporters that seeing Iraqi armor out in the open, sometimes as many as 100 in a row, was exactly what allied pilots had been looking for. White compared the battlefield scene of Iraqis moving in all directions to "flip[ping] on the light in the kitchen at night and the cockroaches start scurrying."

It seemed the only way the Iraqis could take on the coalition forces at point blank range was to use treacherous tactics. Near Khafji, a column of Iraqi tanks advanced toward Saudi positions with their turrets pointing backward in a universal sign of surrender. Military commanders said the Iraqi tankers suddenly turned their guns around and began firing on Saudi troops.

During those weeks prior to "G-day," Marine units, including artillery, reconnaissance and combined arms task forces, were busy disrupting Iraqi preparations and defensive positions. Marine artillery and Army multiple-launch rocket systems, using Air



Force airborne spotters as well as Marine forward and aerial observers and clandestine recon teams inside enemy territory, had enormous success with artillery raids and roving gun tactics.

Marine artillery units moved to positions near the Kuwaiti border, usually under cover of darkness, fired at enemy concentrations and positions and then quickly changed positions. These strikes not only inflicted damage, but disrupted Iraqi command and communications systems, confusing enemy commanders.

These combat operations, characterized by rapid day and night advances; extensive use of combined arms attacks; the application of mass and force at critical places and times; and the

use of land and amphibious deceptions, raids and feints, exemplified maneuver warfare concepts now embraced by the Marine Corps and proven decisive in Operation *Desert Storm*.

Naval gunfire from the 16-inch guns of the battleships USS *Missouri* (BB 63) and USS *Wisconsin* (BB 64), provided the "Sunday punch" that softened up the future battlefield.

At the same time, Marine forces afloat were sharpening their teeth. The 18,000 Marines embarked in 33 amphibious ships in the northern Persian Gulf gave the allied battle plan depth and strength while presenting Iraqi military planners with the uncertainty of not knowing when and where the allies would strike. As G-day approached, the Navy-Marine Corps team on land and at sea was ready and able to strike wherever and whenever the order came. In fact, some Marines were already getting started.

Two nights before the start of the ground offensive, Marines from Task Force "Taro" (3rd Marine Regiment) and Task Force "Grizzly" (4th Marine Regiment) slipped deep into Kuwait from their positions on the Saudi border. Their missions were to find paths through the obstacle belts and mark safe lanes for the infantry and mechanized forces which would soon follow.

Marines like Staff Sgt. Charles Restifo, 3rd Bn., 7th Marines, demonstrated exceptional bravery in breaching these dangerous mine fields, at times under sporadic enemy fire. At one point, after other efforts failed, Restifo took his bayonet in hand, dropped to his knees and quietly probed for mines in the darkness.

The vital missions of these task forces allowed the Marine divisions to press forward rapidly and with confidence when G-day finally arrived.

On the night of Feb. 23, the countdown to the "main event" continued. Under a half moon, with intermittent showers and a biting wind, Marine units all along the Kuwaiti border moved into final attack positions and waited for the order to commence the ground offensive. The deadline set by President Bush for Iraq to get out of Kuwait had expired. Now it was time to force them out.

Marines from task forces with names like "Ripper" and "Papa Bear" slipped into chemical suits and boots, took their nerve agent pills and began firing up LAVs and M-60 tanks. Marine rillerymen moved their big guns into position. Mine plows were at the ready. Individual riflemen steadied their nerves.

Unit commanders and Navy chaplains gave last-minute words of encouragement, inspiration and comfort to Marines who would lead the assault. Not surprisingly, the Marines were to be the lightning rod in Saddam's ill-fated "mother of all battles."

Maj. Craig Huddleston, executive officer of 3rd Bn., 3rd Marines, told his warriors, "We said [to Iraq], 'get out of Kuwait or else.' ... Well, you guys are the 'or else.' You're going to do great things tonight, great things for our country and even greater things for this country."

With the Iraqis having no "eyes" over the battlefield to see what allied force strategy was forming, the United States and its coalition partners unleashed Schwarzkopf's "Hail Mary" play.

The Iraqis, it seemed, were convinced that the battle would be joined at the center of their defensive lines along the Saudi-Kuwait border, as well as by amphibious assault. The Marines on the ground were not about to let them down.

But what the Iraqis did not realize was that the allies had

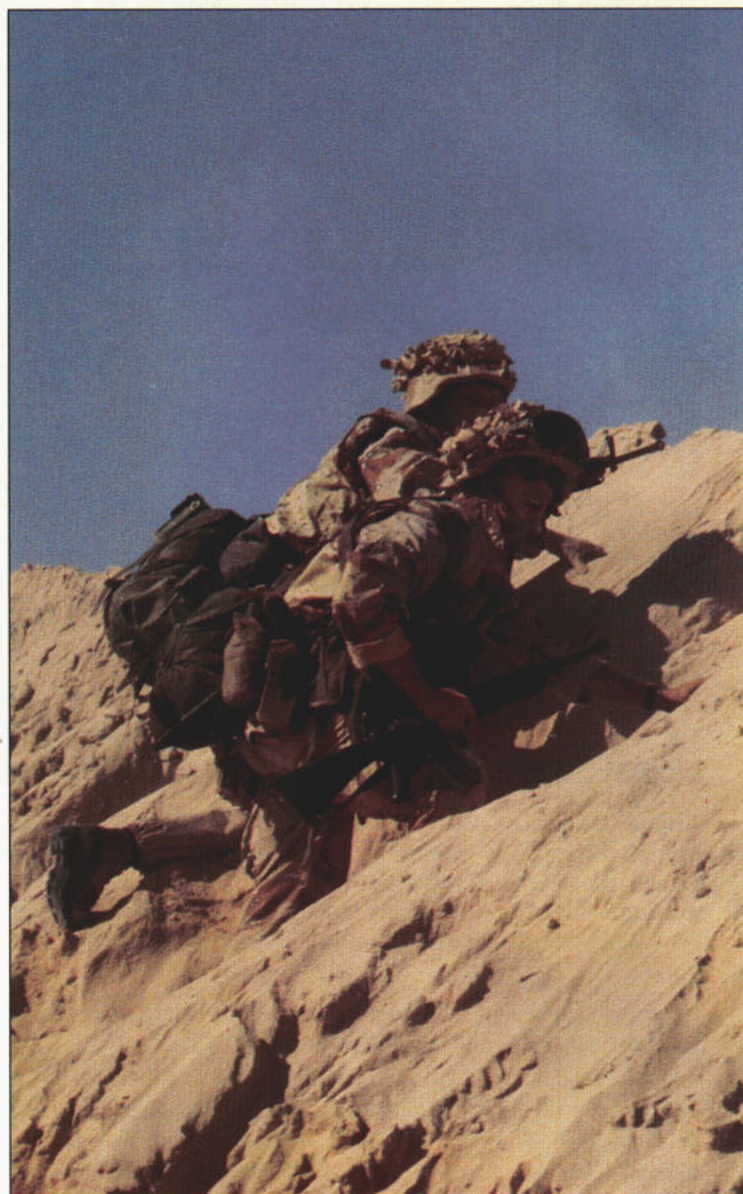


Photo by Cpl. R.J. Engbrecht

secretly moved two entire corps of American forces, supported by British and French divisions, far to the west in one of the largest battlefield troop movements in history. This giant "end run" formation of more than 250,000 soldiers spread over several hundred miles moved deep into Iraqi territory from the Saudi border behind the Iraqi forces to deliver a fatal "left hook."

The awesome flanking maneuver not only cut off all avenues of retreat north and west of Kuwait, it fulfilled Chairman of the Joint Chiefs of Staff Army Gen. Colin Powell's prediction that the coalition — specifically the American military — were going to "cut off the head ... and kill" the Iraqi army. The Marine Corps was tasked with going for the jugular.

After performing their own deception by shifting both Marine divisions some 40 to 50 miles northeast from their original staging area, the Marines stepped off into battle.

At 4 a.m., Feb. 24, the 1st and 2nd Marine Divisions, each more than 18,000 strong, and the U.S. Army's 1st Brigade ("Tiger Brigade"), 2nd Armored Division, plunged into the attack. They were supported by the 3rd Marine Aircraft Wing and thousands of combat service support staff from the 1st and 2nd Force Service Support Groups.



Photo by Cpl. Kenneth Manago



Photo by J01 Lee Bosco

Above: Marines of the 13th MEU secure the coastal island of Umm Al-Maradim. **Left:** This Soviet-built tank is just one of more than 1,060 tanks destroyed or damaged by Marines during *Desert Storm*. **Opposite page:** Marines scale a sand berm to move into attack positions.

Under the cover of a cold rain — an "infantryman's dream" — and the thick smoke from burning Kuwaiti oil wells, the Marines began to punch their way northeast from the Kuwaiti border's elbow (or center) to objectives in and around Kuwait City.

On their way, the Marines had to cross two belts of minefields, 12-foot high sand berms, barbed-wire defenses, booby traps and fire trenches, all while under attack by Iraqi artillery. These "impenetrable barriers" were quickly breached by the Marine teams. In the first drive across the border, the 1st Division moved 40 miles, and the 2nd Division drove 20 miles, said Lt. Gen. Joseph P. Hoar, the Marine Corps deputy chief of staff for plans, policies and operations in Washington, D.C.

As the two Marine divisions advanced, two Saudi and Qatari task forces moved up Kuwait's east coast in a similar drive.

The initial Marine advance was described by Schwarzkopf in his Feb. 27 briefing:

"It was a classic, absolutely classic military breaching of a very, very tough minefield, barbed wire, fire trench-type barrier," the general said. "They went through the first barrier like it was water. Then they brought both divisions steaming through that breach. Absolutely superb operation — a textbook, and I think it

will be studied for many, many years to come as the way to do it."

1st Division breached the initial field of anti-tank, and anti-personnel mines in quick time. Line charges were fired by combat engineers to explode the hidden mines, and tank plows cleared safe route lanes. Marine task forces from the 1st, 3rd, 4th and 7th Marine Regiments, and the 1st Light Armored Infantry Battalion led the charge.

Overhead, *Cobras* and *Harriers* provided close-air support as the Marines pushed forward, meeting occasional resistance. Navy A-6 *Intruder* attack planes laid down heavy barrages. Marine aircraft attacked in waves as engineers continued to shoot line charges and drop bundles of plastic pipes near trenches so the blade tanks could form makeshift bridges.

The shock, firepower and mobility of the Marine attack had turned the key in Kuwait's liberation door. Defending soldiers felt *Desert Storm's* violent hail raining down around them.

Even though the 1st Division Marines encountered artillery fire and a mechanized counter attack from T-62 tanks supported by T-55 tanks dug in up to their turrets near the second defensive belt, the Marine attack proved unstoppable.

Col. John F. Stennick, the 1st Division chief of staff, said that advancing Marines encountered Iraqi tanks and troops throughout the day, but Iraqi forces offered little resistance.

"They come out fighting," Stennick said, "but when you take out one or two of the front runners, the rest of 'em say, 'Hey, that's enough.'"

Most of the Iraqis fought for only a few minutes before they began surrendering in droves. The massive artillery and air support sparked a frenzy of surrender that, at times, slowed the progress of advancing Marine units. "All we could do is herd them like sheep and push them along," said Lt. Col. Jan Hurly.

Meanwhile, the 2nd Marine Division was enjoying equal

success. With the Army's Tiger Brigade on the west flank, the 8th Marine Regiment to the east, and the 6th Marine Regiment in the center, the division kicked off its attack at 5:30 a.m. Within hours, they too had breached both defensive belts and were trouncing Iraqi defenders. Facing enemy mortar rounds and small-arms fire, 2nd Division drove its way into Kuwait and took more than 5,000 enemy prisoners of war (EPWs) by the end of the first day.

"While the resistance was described essentially as moderate as we were punching through those two fortified belts, it was never coordinated," Hoar said.

Lt. Gen. Walter E. Boomer, the commander of all land-based Marine forces in *Desert Storm*, told reporters that the Marines were "relatively certain the Iraqis were done for" once his forces made it through the obstacle barriers. Boomer spent most of the four-day war on board a mobile command center with the 2nd Division. His principal commanders were Maj. Gens. Bill Keys (2nd Marine Div.) and Mike Myatt (1st Marine Div.).

By mid-morning of the first day, as Marines ripped through the battlefield with relative ease, Boomer told reporters the war was far from won. "We're taking on 11 Iraqi divisions with two Marine divisions," he said. "Our force ratios are horrible."

Some commanders feared the Iraqis had retreated deeper into the battlefield, preparing for a final, massive assault. "The greatest fear was the fear of the unknown," Keys said later. "We didn't know what to expect."

Isolated battles were brief, but sometimes fierce. In one engagement near the Burgan oil fields, an Iraqi tank column advanced so close to a Marine Corps artillery battery that one enemy Multiple Launcher Rocket System was destroyed by a point-blank shot from a Marine 155mm howitzer. Although the howitzer is normally used to shoot 100-pound shells at targets 10 to 14 miles away, the gun commander trained his weapon directly at the unlucky target less than 800 yards away and fired a crushing bulls-eye.

"Something like that is every artilleryman's dream, and nightmare," said Maj. Pete Peterson, a division intelligence officer.

As Marines continued their attack into the heart of Kuwait, the sea-based arm of the Navy-Marine team continued to flex its muscles. Battleships continued deadly-accurate gunfire on targets spotted by sailors and Marines on the ground and in the air.

Meanwhile, the amphibious task forces continued to demand difficult decisions from the Iraqi generals. Because of the threat of an amphibious landing and the uncertainty of where and when it would come, the Iraqis dedicated six divisions, totaling some 80,000 men, to the defense of the coastline. In addition they were forced to garrison troops on Bubiyan and Faylaka Islands, both of which commanded key sea approaches to vital areas.

Even though the landing never came, Schwarzkopf deemed it a critical success. "We had every intention of conducting amphibious operations if they were necessary," he said.

The Iraqis seemed sure that the amphibious attacks were imminent. During the liberation of Kuwait City, Marines found



an elaborate sand table replica of the coastline that showed not only the disposition of the American units, but also from which direction the Iraqis expected the water-borne assault.

The threat of an amphibious landing helped offset the fact that the allies were outnumbered on the battlefield.

"We wanted the Iraqis to continue to believe that we were going to conduct a massive amphibious operation," Schwarzkopf said. "We wanted [Saddam] to concentrate his forces [on the coastline], which he did."

However, about 7,500 5th MEB Marines did off-load at Saudi ports in the beginning of the ground attack, later designated as the 1st MEF reserve force. The amphibious feints proved effective, noted Maj. Gen.

Harry Jenkins, commander of the amphibious Marine forces.

"As long as they are watching the coast, they are not engaging our units in Kuwait and farther west," Jenkins said. "The key [was] to keep him off balance."

Marine AV-8B *Harriers*, AH-1 *Cobra* helicopters and special operations units from the 4th MEB aided Arab forces in the east coast drive. By the second day, as both Marine divisions pushed farther into Kuwait, they continued to face sporadic resistance.

As 1st Division neared its first-day's objective, the Al Jaber Airfield, it engaged two brigades of Iraqis (nearly 5,000 men) in one of its largest tank battles.

Reports from the front said that the Marines called for a division "time-on-target," a maneuver during which they fired all division artillery simultaneously. As a result of the punishing barrage, observers said Iraqi tanks and armored vehicles "boiled out" of the Al Wafrah oil field complex. The Marines counted about 80 tanks and 100 other vehicles destroyed.

"I hate to say it," Capt. Kelvin Davis was quoted by a pool

"When we went in, we overwhelmed them. I don't think they had the ability to resist ..."

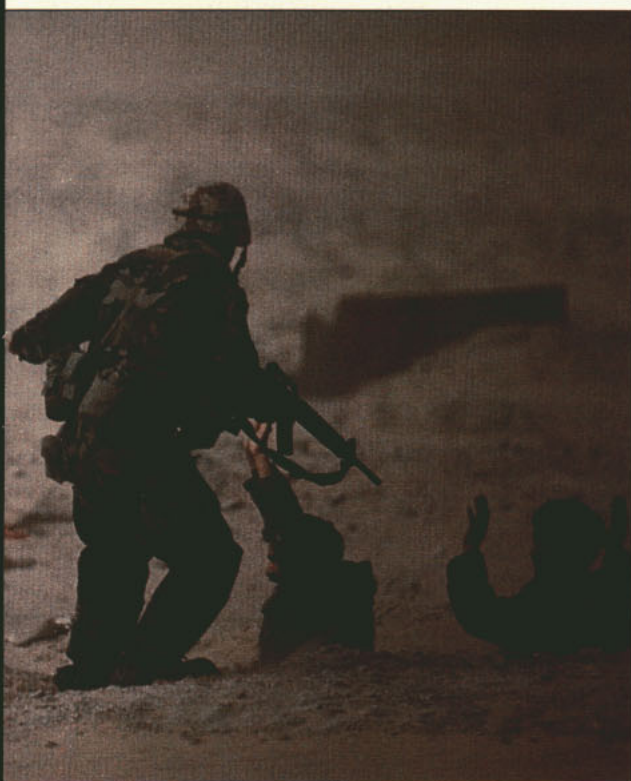


Photo by Todd Buchanan/Philadelphia Inquirer



Photo by Patrick Downs/Los Angeles Times

Above: 2nd Division Marines force Iraqi soldiers from their bunkers inside Kuwait. Right: Marines move into Kuwait City after defeating 11 Iraqi divisions during the 100-hour ground campaign.

reporter as saying, "but once we got rolling, it was like a training exercise with real people running around. Our training exercises are a lot harder."

The 2nd Division reached its final objective, the town of Al Jahra, by the end of the third day of fighting. The Marines' control of this town virtually cut off any escape routes for the fleeing Iraqis, including northward into Iraq. The stage was set now for the final blow — the liberation of Kuwait City.

1st Marine Division forces continued their push toward Kuwait's capital, destroying more than 100 tanks on the way. By the morning of Feb. 27, the Marines had secured the Kuwait International Airport as well as outer districts of Kuwait City.

"Where we went in, we overwhelmed them," Boomer told reporters. "I don't think they had the ability to resist along with the pounding by air and artillery."

The general said that many of the Iraqi soldiers just didn't have the heart to fight, especially when they realized just what they were up against. "With the kind of force that we had coming down on them ... it was certain they were going to die."

By the time the airport was secured, the two Marine divisions had gone up against an Iraqi force of 11 divisions and had decimated them. At 8 a.m. Gulf time, Feb. 28, American forces ceased offensive combat operations by order of President Bush.

The Department of Defense reported that in the 100 hours of offensive combat, the Marines and one Army Brigade, supported by Marine and coalition aircraft, destroyed or damaged 1,060 tanks, 608 artillery pieces and two *Scud* launchers. More than 20,000 Iraqi soldiers surrendered to the Marines.

"I sure hope the Iraqis are good lovers," one Marine said, "because they sure can't fight." After three days of fighting, the doors to Kuwait City were open Feb. 27.

Arab troops were the first to enter the liberated city, after Marines pulled over and diplomatically offered them the honor, but a convoy of Marines was not far behind. In fact, the Marines had already entered Kuwait City. A Marine Force Reconnaissance platoon secured the U.S. Embassy the previous evening.

Armed with the "usual weapons" (M16-A2s, CAR-15s, M60s, M203s and SAWs), 12 leathernecks from 2nd Force Reconnaissance slipped into the embassy and secured their own place in the history books.

During the victory ride into the capital city, the main body of Marines was met by scenes of joy and gratitude not seen since the days of World War II, nearly a half century ago.

Pool reports said that someone tossed Gen. Boomer a Kuwaiti flag as he rode into the shattered city on his mud-splattered mobile command post. "It was a once-in-a-lifetime experience," he said. "Some things are worth fighting for."

Being a part of the liberation of Kuwait is something that the 1st MEF Marines will never forget.

"I like to think of myself as tough — like a junkyard dog," said Sgt. Maj. Rafe J. Spencer, the 1st MEF sergeant major, "but I had to hold back the tears." □



Greater gators

Amphibious forces kept Saddam guessing

As fighting words flowed from the mouth of Saddam Hussein during the early days of Operation *Desert Shield*, the essence of the Navy-Marine Corps team that added a powerful element in the allied maritime scenario steamed outside the Persian Gulf — a 16,000-man amphibious task force.

Within a month of the invasion of Kuwait, more than 20 amphibious ships from Norfolk and Little Creek, Va., and San Diego completed the trek to the Gulf of Oman, where nearly 9,000 Marines and 7,000 sailors waited to "hit the beach" to help eject Hussein's 430,000-man force from Kuwait.

"We represented a new factor in the equation that Saddam had to deal with," said RADM John B. LaPlante, commander of Amphibious Group (PhibGru) 2, aboard USS *Nassau* (LHA 4). "He came into possession of islands and a significant length of coastline. By our presence in-theater we very much complicated his strategic equation and increased his level of uncertainty."

The task force, with Marines from the 4th Marine Expeditionary Brigade (MEB) and 13th Marine Expeditionary Unit (MEU) embarked, offered air, land and sea assets tailor-made for coastal assault. *Harrier* attack jets and helicopters would provide air cover for infantry and armor that would hit the beach. The highly-mobile force's position in Middle East waters could deliver fierce reprisal for Iraqi aggression within hours — aided by the key element of surprise.

"Coastal defense is not an easy thing to do," LaPlante said. "We could come at him very quickly from over the horizon anywhere — that's our business."

The creation of the task force from several amphibious

ready groups (ARGs) represented the largest coastal assault force in more than 30 years, when amphibious forces landed on Korean beaches during the assault on Inchon.

"The Navy-Marine Corps team, in the purest sense of the term, really functioned out here," said 4th MEB commander, Maj. Gen. Harry Jenkins, aboard *Nassau*. "We got underway very quickly, and that wouldn't have been possible without the sailors and Marines that are spread throughout the task force. They had a clear sense of purpose and worked hard."

As Seabees, corpsmen and Marine teammates in the Saudi Arabian desert formed the human line in the sand, their amphibious counterparts swarmed to Southwest Asian waters to strangle water routes to Iraq and Kuwait while preparing for war. During the transit and upon arrival, "gator" sailors and Marines underwent constant instruction in chemical weapons defense, cultural and intelligence training, just as their sandy counterparts did, coupled with demanding shipboard drills and assault training against neutral Arabian Peninsula beaches.

As Marines waged a battle against corrosion that threatened their warfighting hardware below decks, keeping the highly-visible amphibious component's combat edge honed was the greatest challenge for the shipboard warriors.

"Their anxiety level is up as they face the 'fog of war,'" said Sgt. Maj. Doug Berry, 4th MEB Sergeant Major, aboard *Nassau* after one month on-station. "Combat is the easy part. Maintaining your edge physically and mentally is the hardest part about service in the fleet Marine force."

Berry and landing force non-commissioned officers kept their troops in constant training as younger Marines grew anxious to answer the call to arms. Training grew more





Photo by LT K.F. Flynn

intense as amphibious forces performed exercises off the coast of Saudi Arabia to keep the enemy wary of an invasion from the sea.

Embarked Marines were also busy responding to calls from maritime interception force warships. Marines aboard the five ships of ARG Alfa were among the first combat troops placed aboard Iraqi vessels during maritime intercepts in the early days of *Desert Shield*. Along with Navy sea-air-land teams (SEALs), Marines backed up boarding teams composed of sailors and Coast Guard personnel during hostile boardings.

Amphibious forces also played a major role in clearing the northern Persian Gulf of mines. Helicopters performing mine countermeasures used versatile amphibious flight decks inside mine-infested waters off the Kuwaiti coast. USS *Tripoli* (LPH 10), USS *New Orleans* (LPH 11), USS *Raleigh* (LPD 1) and other amphibious ships acted as home base for the MH-53E mine-hunter helicopters, with Marine AH-1W *Cobras* acting as escorts. The largest mine-clearing effort since World War II allowed battleships to pummel the Kuwaiti coastline with naval gunfire.

The amphibious presence grew following President Bush's Nov. 8 decision to nearly double U.S. forces in the Middle East

Above: The setting sun lights ships of the amphibious task force during operations in the North Arabian Sea. Below: A Marine CH-53 helicopter approaches an amphibious ship's flight deck in the Persian Gulf. Opposite page: An aircraft handler directs a *Harrier* on the deck of USS *Nassau* (photo by PH1(AC) Scott M. Allen).



Photo by Capt. Rick Mullin, USMC

theater of operations. The Navy sent RADM Stephen S. Clarey's 13-ship Amphibious Group 3 from three West Coast ports with 7,300 Marines of the 5th MEB, commanded by Brig. Gen. Peter J. Rowe, embarked to join their shipmates already on scene — the largest amphibious group deployment since World War II.

USS *Germantown* (LSD 42) and her embarked Marines from Camp Pendleton's 5TH MEB were a shining example of Navy-Marine Corps team spirit, said CDR William J. Marshall III, *Germantown's* commanding officer.

"Through the intense training and exercises conducted during the amphibious group's transit to Southwest Asia, they had become a family," Marshall said. When war became inevitable, that family became even closer.

Nearly 18,000 Marines aboard the now-largest amphibious assault force in nearly 50 years learned by radio that the ground war had begun as they readied to assault Kuwait's beaches at a moment's notice. Hearing that the long-awaited ground offensive had started made most of the men eager to join in.

In the hours just prior to the ground offensive, 7,300 5th MEB Marines hit the Saudi beaches to augment their 1st Marine Expeditionary Force (MEF) counterparts near the Kuwait border. As the 1st MEF's reserve force, 5th MEB warriors acted as backup in case the ground offensive was stalled by heavy resistance.

Though one of the most powerful arrows in the U.S. quiver was never used during Operation *Desert Storm*, the amphibious force's feints played a major role in the allied victory, forcing Iraq to keep nearly 80,000 troops along the Kuwaiti coastline. As naval gunfire and air assaults pounded Kuwait and Faylaka Island, Iraq readied for the coastal assault that would never come. Each shell pinned the enemy in their trenches as the coalition's "end-run" trapped them between the allied front and the sea.

"The deception plan ... will probably go down as one of the most carefully contrived deception operations in military history," Jenkins said.

Shipboard Marines tried to take comfort in the fact that their presence played a key role, but months of rigorous training had adrenalin levels at a fever pitch throughout the ground offensive.

"I can equate it to being all psyched up for a football game that gets called on account of weather," Berry said. "Their bodies and minds are set to endure the rigors of combat, so it's an emotional letdown for them if they're not used."

Marine Corps Commandant Gen. Alfred M. Gray saw the feint in a different light. "To win 100 victories in 100 battles is not an acme of skill," he said in a message to fleet Marine forces, quoting the military strategist and philosopher Sun-tzu to define the key role his Marines played. "To subdue the enemy without fighting is the acme of skill." □

Flexible response

The Navy-Marine team responds a continent away

The Navy-Marine Corps team lived up to its tradition of mobility and flexibility in true fashion while deployed in support of Operations *Desert Shield/Storm*, responding to calls for help a continent away from the crowded Kuwaiti theater of operations.

While attention was focused on the invasion and eventual liberation of Kuwait, Navy and Marine Corps units were also busy evacuating civilians from two other hot spots on opposite coasts of Africa. Ships and Marine Corps units temporarily detached from task forces operating in the Mediterranean, Persian Gulf, Gulf of Oman and Red Sea to render assistance in evacuating civilians from two war-torn African countries.

On Aug. 5, Marines from the U.S. task force off the coast of Liberia began the evacuation of 2,690 people, including 330 U.S. citizens, from the capital city of Monrovia.

Operation *Sharp Edge* began with a pre-dawn meeting in the wardroom of USS *Saipan* (LHA 2) to finalize a plan that had been in the works for about two months. During that time, *Saipan* and her Mediterranean Amphibious Ready Group, USS *Ponce* (LPD 15), USS *Sumter* (LST 1181), Fleet Surgical Team 2 and the destroyer USS *Peterson* (DD 969), waited off the Liberian coast for orders to begin the evacuation.

Since December 1989, civil war had raged between rival factions, and the safety of American citizens could no longer be guaranteed. Tension grew as Liberian rebel leader Prince Johnson said he would begin rounding up foreigners to force international intervention into his fight against Liberian President Samuel Doe. Johnson then threatened to attack U.S. Marines at the embassy if the United States did not intervene on the rebel side. After two months of waiting, it was time for action.

As dawn broke, more than 200 Marines

Left: Evacuees arrive aboard USS *Trenton* following their airlift from Mogadishu, Somalia. **Right:** Marine 1st Lt. Anthony Stone (with binoculars) observes the situation in the U.S. Embassy compound in Monrovia, Liberia.



Photo by LT KE Flynn

from Hotel Company, 2nd Bn., 4th Marines ran across *Saipan's* flight deck and climbed into waiting CH-46 *Sea Knight* and CH-53 *Sea Stallion* helicopters for the 20-mile ride to the U.S. embassy compound in Monrovia.

Saipan turned into the wind, and the helicopters lifted off for the noncombatant evacuation operation (NEO).

The group evacuated not only Americans, but also Liberian, Italian, Canadian and French nationals. The operation ended Nov. 30, after opposing forces agreed to a cease-fire.

Afloat support for the operation, the longest-running NEO in recent naval history, ended Jan. 9, when the amphibious transport dock USS *Nashville* (LPD 13), Helicopter Combat Support Squadron 4 and elements of the 26th Marine Expeditionary Unit departed the Liberian coastal area known during the operation as "Mamba Station."

But *Sharp Edge*, which showed a remarkable display of staying power, did not end with the evacuation. Sailors and Marines from the task force stayed to provide humanitarian assistance by airlifting food, water, fuel and medical supplies to the ravaged city.

Just a few days before Operation *Sharp Edge* ended, and a continent away, another civil war threatened American lives.

The amphibious assault ship USS *Guam* (LPH 9), amphibious transport dock USS *Trenton* (LPD 14) and Marines from the 4th Marine Expeditionary Brigade embarked in *Guam* raced from their positions in the North Arabian Sea in support of Operation *Desert Shield* to rescue Americans and foreign nationals from war-torn Somalia.

Marine Corps helicopters lifted off the decks of *Guam* and *Trenton* during the dark, early morning hours of Jan. 4. The job of the Marines and sailors aboard the helicopters was to evacuate 260 American and other foreign civilians caught in heavy fighting between Somali rebels and government troops.

The bold rescue, named Operation *Eastern Exit*, was implemented within hours of receiving an urgent plea for help from the U.S. embassy in Mogadishu.

Indeed, from the time the U.S. Amba-

sador in Somalia sent his first message, "I really view this with concern, we've got to get out of here ...," to the time the execute order was given, was less than 48 hours.

The helicopters lifted off while the ships were 460 miles from the Somali coast. They refueled twice in-flight, courtesy of Marine Corps KC-130 tankers that took off from a Persian Gulf air base in Bahrain.

Aerial refueling of the huge CH-53 helicopters under clear daylight conditions is at best a tricky maneuver. But the operation took on new proportions when time constraints, night operations and the difficulty of the mission were added.

The refueling operation was the first of

"I really view this with concern, we've got to get out of here."

its kind performed during such a lengthy flight ashore from a ship, said Marine Corps Commandant Gen. Alfred M. Gray.

Marine Heavy Helicopter Squadron 461 reached the embassy, dropped off its Marines and brought aboard 62 evacuees.

Fleet Marines set up defensive positions around the embassy while conducting the evacuations.

In all, 260 citizens from 30 nations, including 51 Americans, and the diplomatic contingent from the Soviet Union

were shuttled aboard the two waiting ships. A group of U.S. officials and the Kenyan ambassador, who were trapped by gunfire in an office two blocks from the U.S. embassy, were escorted by Marines through fierce firefights between rival factions. After the mission was accomplished, the ships steamed back to the North Arabian Sea in time to support Operation *Desert Storm*.

Marines and sailors have been perfecting evacuation operations for nearly 10 years. And they have been getting more and more practical, real world experience during that decade.

Since 1980, the Navy-Marine team has responded to more than 50 international and regional crises. Their response to events while supporting Operations *Desert Shield/Storm*, was testimony to the effectiveness of the team.

"It's important for us to recognize that we are very mobile, very flexible and we train together (for these operations) all the time," said ADM Robert J. Kelly, commander in chief of U.S. Pacific Fleet.

"The trick," said Marine Lt. Gen. Joseph P. Hoar, deputy chief of staff for Marine Corps plans, policies and operations, "is really the inherent flexibility of the Navy-Marine Corps team to be able to move quickly to an area of strife and to be able to respond quickly." □



Photo by JOI Alan Uyenco

Combat damage

Controlling chaos

The saltiest of sailors will attest that any ship can be a minesweeper — once. These ominous words rang true on the waters of the Persian Gulf Feb. 18, 1991, as Iraqi mines tore into two U.S. ships during the largest minesweeping operation since the Korean conflict.

Within three hours and 10 nautical miles of each other, the helicopter carrier USS *Tripoli* (LPH 10) and the *Aegis* cruiser USS *Princeton* (CG 59) sustained serious mine damage that sent damage control (DC) parties swarming to save their ships, using lessons learned from a mine strike three years earlier against the guided-missile frigate USS *Samuel B. Roberts* (FFG 58) in the very same waters.

Tripoli, acting as the flagship for mine countermeasure forces clearing the waters 70 miles off the Kuwaiti coast, sustained a 20-foot by 30-foot hole in her starboard bow about 10 feet below the waterline after she struck an Iraqi contact mine. The mine appeared to be moored just beneath the surface of the water, said CAPT Bruce McEwen, *Tripoli's* commanding officer.

The 4:36 a.m. explosion caused flooding in six auxiliary spaces, but damage was minimized by the crew's immediate DC efforts. With only four crew members injured, *Tripoli* continued her mission with embarked minesweeping helicopters for four days after the crew's battle damage repairs.

One of the spaces contained a load of gray paint and paint thinner. As crew members attempted to isolate those spaces, they became soaked with the thinner, paint and water.

But in the cold, wet and frightening environment, the sailors shored up cracked, leaking bulkheads and ventilated compartments in which paints and other toxins were leaking from ruptured tanks.

Those reporting to battle stations near the damaged area had to abandon them because of the fumes. Two crewmen were trapped in sleeping quarters near the blast area where ladders were twisted and hatches were warped shut. "We couldn't get them open. When we finally got them out, they were drenched in paint and thinner," said DC party crewman Fireman Apprentice Adonis Oldenburg.

The force of the blast left the helicopter carrier temporarily dead in the water as

repair crews quickly stopped the flooding in the paint storage locker. McEwen said the crew responded quickly and calmly, manning DC teams and reporting to their battle stations, preventing further damage to adjacent compartments.

"Everybody knew where to go and what to do. There was no panic," said Aviation Support Equipment Technician 2nd Class Timothy Pickens, a helicopter crewman assigned to a DC party. "It was entirely training, training and training. We complain about it, but when you come right down to the bottom line, you need it — it's your best friend. We proved it here."

No more than three hours later, *Princeton* suffered a similar fate from another Iraqi mine, sustaining damage which included a jammed port rudder and a crack in her superstructure after the mine exploded under her stern. Three crewmen were injured, one seriously.

The cruiser was providing defense for the coalition mine sweeping force, which was busy clearing potential mine fields in preparation for moving in the battleships, and for any possible amphibious landings.

CAPT Edward Hontz, *Princeton's* commanding officer, had received information that a possible *Silkworm* missile site was being activated along the Kuwaiti coast, about 30 miles from the mine sweeping activity. He decided to put the ship between the shore and the ships he was protecting.

Ironically, the submerged mine exploded as the captain was speaking to the crew about the potential mine threat and the *Tripoli* strike. The explosion raised *Princeton's* fantail out of the water into the air, folding the keel like a hinge. This caused extensive bending and breaking of the I-beams that provide structural strength for the ship, buckling the thick steel deck.

"We (on the bridge) were moving up and down very rapidly," Hontz said. "We all grabbed onto something and tried to maintain our footing."

Boatswain's Mate 3rd Class James Ford, serving as mine lookout on the bow of the



ship, was thrown 10 feet into the air. He suffered serious injuries. Just seconds after the blast, Signalman 3rd Class Dennis Amador was already giving first aid to Ford. Ford and two others were taken to the British ship HMS *Argus* (A 135) for initial treatment, then transferred to the hospital ship USNS *Mercy* (T-AH 19).

Two seconds after the initial blast, a second mine went off about 300 feet off the ship's starboard bow. This produced

ALL HANDS

Damage control

saves the ship



Photo by JOT(SW) Joe Galowitz

way to their battle stations by the time the general quarters alarm sounded. DC and repair parties were already at work trying to save their ship.

The force of the blasts ruptured water lines and fuel tanks, forcing repair parties to work in a mixture of fuel and water. Pumps were activated within minutes of the mine explosion. Once the water and fuel were pumped overboard, the leaking fuel tanks were repaired. After the most serious damage was temporarily fixed, crews began repairing cooling systems for the ship's electronics system.

Despite the damage, *Princeton* crew members continued to work feverishly, providing defense to the other ships in the minesweeping operation.

Many of *Princeton*'s crew members are plank owners and have been on the ship since she was commissioned. The pain they expressed was great, said Chaplain (LT) John Gordy III. Many were angry, most were afraid because they knew another blast could sink her, Gordy added.

"After being on this ship for more than two years, I think of her as home away from home," said Yeoman Seaman Apprentice Greg Hightower. "To see the ship damaged to such extreme is like receiving a personal hurt."

"I could see the feeling of pain in the captain's face. This was his ship, and now she was hurt," Gordy said.

Shortly after the mine strike, USS *Beaufort* (ATS 2) and minesweeper USS *Adroit* (MSO 509) maneuvered through the uncharted mine field to reach *Princeton* for underwater inspection. Then *Adroit* led *Beaufort*, with *Princeton* in tow, to safety through the maze of mines.

"This extraordinary 30-hour period is indicative of the very best from our naval officers and men," Hontz said. "Advanced preparation and training plus the fortunate timing of the explosion which found most of the crew in the least vulnerable center area of the ship at the time of the explosion limited the personnel casualties and resulted in no loss of life."

As in the case of *Tripoli*, *Princeton*'s crew responded to the crisis in "heroic fashion, carrying out required procedures in textbook fashion, and in so doing, saved their ship while continuing to protect the forces for which she was responsible," Hontz added.

The crews of *Tripoli* and *Princeton* turned potential disasters into successes. Their training and fast action averted further damage or sinking, said CAPT Paul Rinn, head of the Navy's Ship Survivability Office at the Pentagon. Some of the lessons applied to the *Tripoli* and *Princeton* incidents were learned three years ago, when Rinn and his crew saved *Samuel B. Roberts* after being struck by an Iranian mine April 14, 1988, in the southern Persian Gulf. In each situation, the main link to the survivability of the ships was the swift reaction and performance of the crew.

Rinn said following inspections of both *Tripoli* and *Princeton* that their leadership was far-sighted, disciplined and sound, adding that the crews' great bravery and skill saved both ships.

The whipping action from the blast under *Princeton* caused considerable damage, and the crew did an exceptional job to de-water compartments, he said. "They did it better than it's ever been done before, and they did an exceptional job in bringing the *Aegis* system back on line in rapid fashion."

Tripoli returned to duty as flagship for allied mine-clearing operations the first week of April, after the men and women of battle damage repair crews from USS *Jason* (AR 8) completed six-month's work in 30 days.

After 102 days in the Persian Gulf, *Princeton* shifted colors and returned to the USS *Ranger* (CV 61) battle group following repairs by Navy men and women at a Persian Gulf shipyard.

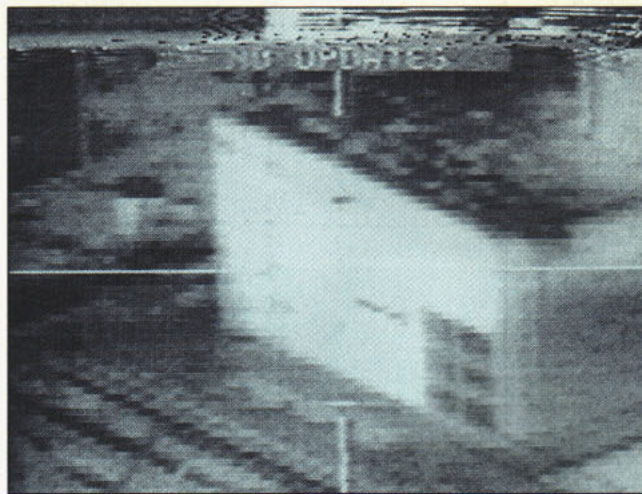
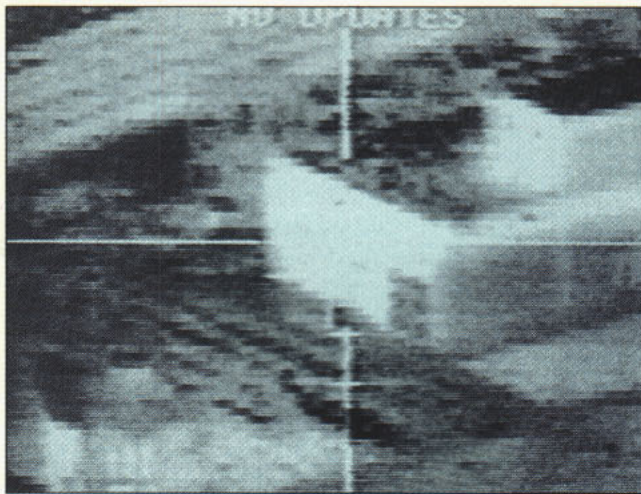
Both COs and Rinn agreed the Navy has always concentrated on damage control training, constantly improving capabilities to counter battle damage, and that training paid off aboard *Tripoli* and *Princeton*.

"We work hard at it. It's like playing football or baseball," Rinn said. "You have to practice to be good at it. And we are good at it. That's no public relations statement — that's a fact." □

CAPT Bruce McEwen, *Tripoli* commanding officer, inspects the 20-foot by 30-foot hole in the starboard bow after his ship struck an Iraqi contact mine in the northern Persian Gulf.

horizontal pressure against the crippled ship. The combination caused a force so great that it cracked sections of the superstructure.

Crew members were already on their



Weapons of war

Deadly technology gives coalition forces the edge

There were many heroes of Operation *Desert Storm* — sailors, soldiers, airmen and Marines whose training and determination helped prevent a prolonged campaign against Iraq. But in addition to the pilots, tankers, infantrymen and flight deck crews of the Navy-Marine Corps team, another group of heroes drew keen interest from the home front. Names like *Tomahawk*, SLAM and *Patriot* became overnight sensations — the high-tech heroes responsible, in part, for the ultimate victory.

These may not be heroes in the normal sense — they lack the attributes of courage and heart. However, they proved to be extremely effective when they bared their teeth against a belligerent foe.

American forces first attacked Iraq at 1:40 a.m. (Gulf time), Jan. 17 when naval forces launched a barrage of *Tomahawk* cruise missiles from the Persian Gulf and the Red Sea against strategic targets in Iraq and Kuwait. LT Guy W. Zanti, USS *Wisconsin's* (BB 64) cruise missile officer, said after the attack, "I heard the correspondents on the radio in Baghdad say, 'I hear bombs but I don't see any planes.' That's because there were no planes."

Desert Storm was the first combat test of the cruise missile system and the warriors who man it. It also marked the first coordinated *Tomahawk* and manned-aircraft strike in history. *Tomahawks* were fired from destroyers, cruisers, battleships and submarines. In all, 20 ships and submarines fired nearly 290 cruise missiles into Iraq and occupied Kuwait.

Tomahawk's outstanding performance and accuracy — 85 percent efficiency during *Desert Storm* — validated the results of years of operational testing. "*Tomahawk* doesn't know the difference between war and peace," said one Navy officer describing its baptism in combat. "It just does its job."

The Navy used two types of *Tomahawk* cruise missiles during Operation *Desert Storm*; the land-attack missile (conventional) (TLAM-C) and the land-attack missile (submunition) (TLAM-D). The TLAM-C delivers a single, 1,000 pound warhead,

whereas the submunition version, TLAM-D, can dispense up to 166, 3.4 pound bomblets in 24 packages.

Tomahawks were used to destroy surface-to-air missile sites, command and control centers, electrical power facilities and were credited with the destruction of Iraq's presidential palace.

The *Tomahawk* uses a vast array of advanced technology to reach its target. Launched with a solid-rocket booster and propelled by a turbo-fan engine, the missile follows guidance directions from its on-board computer. Skimming the ground at 100 to 300 feet, it literally reads the terrain to avoid enemy radar.

Although the missile's warhead is small in comparison to the payloads of modern bombers, it has the advantages of being fast, hard to detect and immune to human traits, such as nervousness. More importantly, it can attack targets too dangerous for pilots.

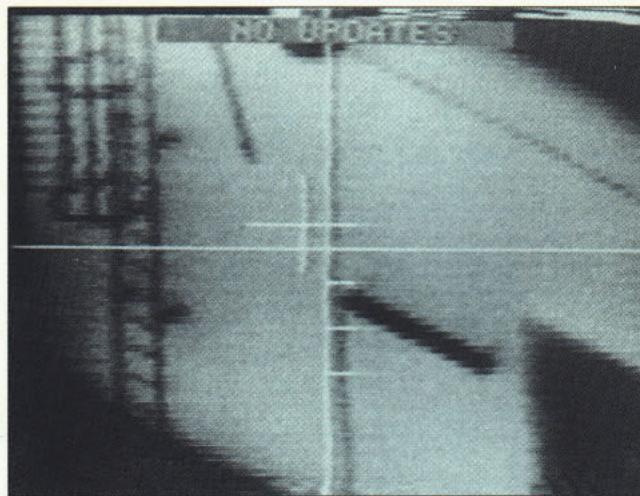
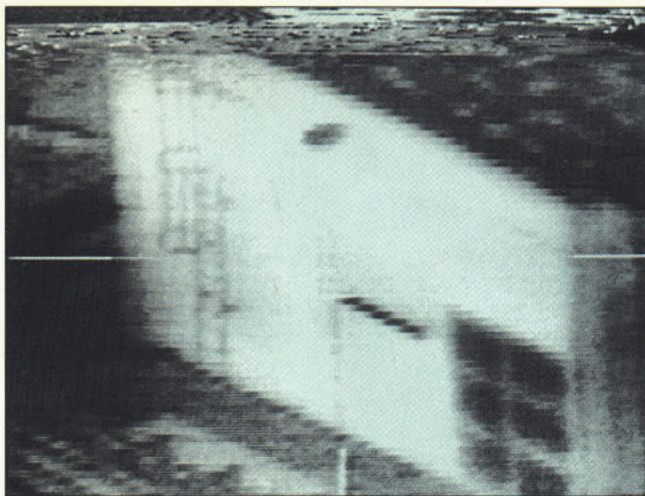
The *Tomahawk's* deadly accuracy is a result of its sophisticated electronics and extensive programming. Overland routes flown by *Tomahawks* are developed by theater mission planning centers at Commander-in-Chief, Atlantic Fleet and Commander-in-Chief, Pacific Fleet with the help of the Defense Mapping Agency. Programming the missile's flight from ship to shore is done solely by the shipboard technicians.

The *Tomahawks* used in *Desert Storm* served to both hit important targets and save allied aircraft by attacking defensive positions ahead of the air assault.

Anti-ship missile attacks were carried out using the *Harpoon* cruise missile, previously used against Iranian warships in 1988 after the mining attack of USS *Samuel B. Roberts* (FFG 58).

In addition to the performance of the *Tomahawk* and *Harpoon*, the Navy also recorded the first combat use of the stand-off land-attack missile (SLAM) and the high-speed anti-radiation missile (HARM). SLAM allows pilots to attack high-value, fixed land targets and ships from more than 50 miles away.

Deployed from carrier-based aircraft, SLAMs use targeting data loaded into the missile before take-off, global positioning



U.S. Navy Photos

system mid-course guidance assistance and video aim-point control to provide a precision strike capability. SLAM's data link system allows the missile to be launched by one aircraft and guided to the target by an operator in another aircraft, normally positioned out of danger, as far as 200 miles away.

The HARM proved effective in the destruction and suppression of electronic emitters, especially those associated with radar sites used to direct anti-aircraft guns and surface-to-air missiles.

"The emphasis on 'smart' weapons," said VADM Dick Dunleavy, assistant chief of naval operations for air warfare, "like HARM, SLAM, and laser-guided bombs has enabled our crews to hit hard and live to fight another day."

Another modern warfare system dedicated to insuring the survival of sailors and their ships is the *Aegis* combat system. *Aegis* ships have the ability to coordinate the protection of the battle group in a multi-threat environment. This high-tech command and control system allows the battle group to concentrate on offensive tasks by reducing resources needed for defense.

The *Aegis* weapon system is the most capable surface-launched missile system the Navy has ever put to sea. It can defeat an extremely wide range of targets from above or below. *Aegis*-equipped ships can engage and defeat enemy aircraft, missiles, submarines and surface ships.

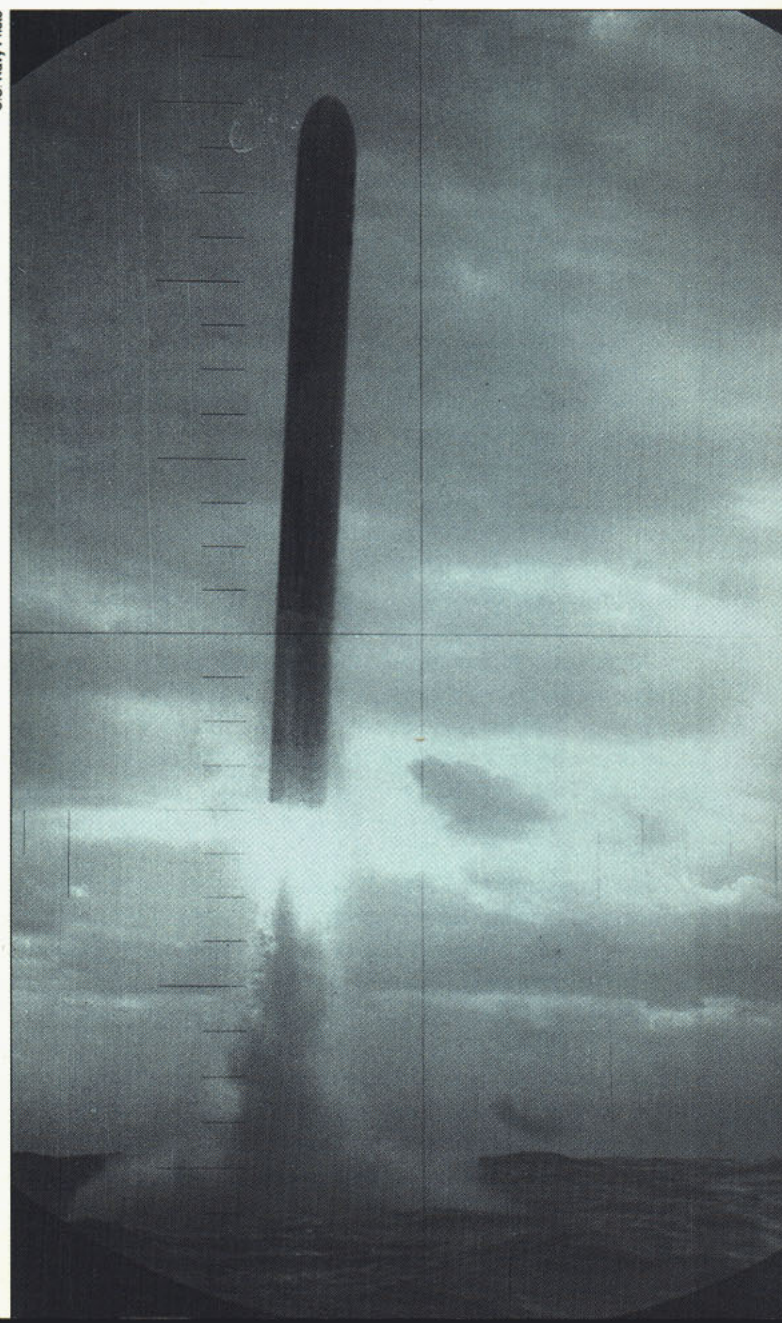
Aegis enhances capabilities in controlling aircraft traffic within its range. Anti-air warfare coordinators, using the *Aegis* technology aboard the cruisers USS *Mobile Bay* (CG 53), USS *Bunker Hill* (CG 52), USS *Princeton* (CG 59) and their counterparts were key in "deconflicting" more than 65,000 aircraft sorties in the Persian Gulf. *Aegis* performed with a 100 percent efficiency rating, resulting in no "blue-on-blue" aircraft losses.

There were many other ways the Navy-Marine Corps team used high-tech weaponry to keep down human losses. The Unmanned Aerial Vehicle (UAV), or Remotely Piloted Vehicle (RPV) as they are sometimes called, was another Gulf War success story. Several times larger than the remote control airplane a hobbyist might own, this mighty mite is now a battle-proven hero. The UAV is equipped with a television camera that relays live battlefield pictures to the launch site.

Launched from ships using a jet bottle, or from the ground, a UAV can operate for several hours at a distance of more than 100 miles from its launch site. UAVs are used to direct gunfire and gather other real-time information from behind enemy lines without risking the lives of airborne or ground-based spotters.

Above: Sequence of a SLAM missile's trajectory during a precision strike mission against an Iraqi super phosphate plant at Al Qaim, Iraq. Below: Periscope view of a Red Sea *Tomahawk* launch from USS *Pittsburgh* (SSN 720) against an Iraqi target. Four submarines launched successful *Tomahawk* strikes during Operation *Desert Storm*.

U.S. Navy Photo



SPECIAL ISSUE



Photo by Sgt. Brad Mizell, USMC



Photo by PH3 Paul Hawthorne

"To be able to hit a target, you have to know within reason where the target is," said CAPT David S. Bill, USS *Wisconsin's* commanding officer. "With our RPVs and our dominance in the air, we know exactly where our targets are, and we can spot rounds precisely."

In addition to its planned mission, the UAV is credited with one accomplishment not even its designers could have foreseen. According to Navy reports that came out during the coalition ground offensive, hundreds of Iraqi soldiers spotted an RPV launched from USS *Missouri* (BB 63), chased it while waving a white flag and raised their hands in an attempt to surrender.

The Marine Corps also employed a number of advanced technology weapons in Operation *Desert Storm*. One extremely effective system was the TOW missile.

The TOW, an optically-guided, wire-controlled guided missile, is one of the most sophisticated anti-armor weapons known today. Mounted on the high-mobility multi-wheeled vehicle, the TOW is a highly-mobile, deadly-accurate tank stopper known to the Marines as "death on a leash." TOWs can be used against tanks, armored personnel carriers and even reinforced bunkers.

Although complex, the TOW is relatively simple to use. The gunner sights his cross hairs on the target and fires. As long as the sight is on the target, the missile will find it. Guidance information is fed by two spools of thin copper wire connected to the missile. "This is probably the most accurate anti-tank weapon ever made," said Marine Cpl. Joey Johansen of the 1st Battalion, 6th Marines.

The Army and Air Force also came out of *Desert Storm* as big winners on the high-tech weapons front. The *Patriot* anti-missile missile greatly mitigated the threat of incoming Iraqi *Scuds*, becoming, next to Army Gen. H. Norman Schwarzkopf, the biggest media star of the war. The Air Force's "smart" bombs and their laser-guided Navy cousins, brought new-age weapons into the homes of everyone in the country. Millions of people were glued to their televisions to see a birds-eye view of the many enemy command and control centers enveloped in clouds of smoke and debris as these video bombs found their mark.

Above left: A Marine TOW missile team patrols the Saudi desert. **Above:** AO1 Michael Gettys prepares an AIM-9 *Sidewinder* missile aboard USS *John F. Kennedy* (CV 67). **Below:** A remotely piloted vehicle, launched from USS *Wisconsin*, heads for Kuwait to conduct spotting for the battleship's 16-inch guns.

There were many success stories in Operation *Desert Storm*. Many new weapons, previously fired only in training exercises, performed exactly as they were intended. The old reliables were just that. The ships, planes, tanks and missiles; everything seemed nearly flawless. However, according to Defense Secretary Dick Cheney, "Everybody talks about the wonder weapons, but the most impressive capability we have is our people." □



Photo by PH2 John C. James

Seabee spirit

They "can do," and did in the desert

Like a family waiting for a home to be built, members of the 1st Marine Division grew excited as their new home began to rise from the desert floor in Saudi Arabia. They were eager to leave the silt and sand that had permeated every nook and cranny of their tents and move into real buildings. They had asked the Seabees for help, and just as they have since World War II, the Seabees responded, "Can Do."

In fact, the Saudi landscape was quickly dotted with structures that looked hauntingly like the old quonset huts built on the battlefields of Guam, the Philippines or any one of the other places when the Seabees have historically supported U.S. troops. The roads, runways, buildings, bunkers and tank barriers carved into the Middle East sand stand as monuments to the "Can Do" attitude — the trademark of the Naval Mobile Construction Battalions (NMCB). More than 5,000 Seabees — 4,000 active duty and 1,000 reservists — served during *Desert Shield/Storm*.

Marines turned to the Seabees when they needed a complete facility constructed to sustain their people. The projects included wood-frame buildings, power and waste water disposal facilities.

Once the buildings were well underway, the battalions' Bravo Companies moved in to provide utilities to operate several large field galleys in the desert. Utilities and other work was completed in time to cook Thanksgiving dinner for troops at the front and two special guests — President and Mrs. George Bush.

At the same time, the members of one NMCB hustled to build another project — nothing less than the headquarters complex of the 1st Marine Expeditionary Force (MEF). Working from dawn to dark for weeks, battalions created the complex by adapting an existing police station and building additional structures.

Members of NMCB Alfa Companies completed road construction and paving. Charlie Companies erected Southwest Asia huts, built on to existing buildings, strung thousands of feet of fencing and erected 20-foot-tall security towers and building revetments to protect vital communications equipment. Crews from Bravo Companies repaired the existing air conditioning systems and sanitary facilities and installed a major electrical distribution system capable of servicing a small town.

In all, Seabees of the Naval Construction Force built 14 galleys capable of feeding 75,000 people; a 40,000-man EPW camp; 6 million square feet of aircraft parking apron after moving 9 million cubic yards of sand and dirt to prepare the sites; four ammunition supply points that held \$2 billion of ordnance and built 4,750 buildings. They also maintained 200 miles of unpaved desert four-lane divided roads that were the main supply routes.

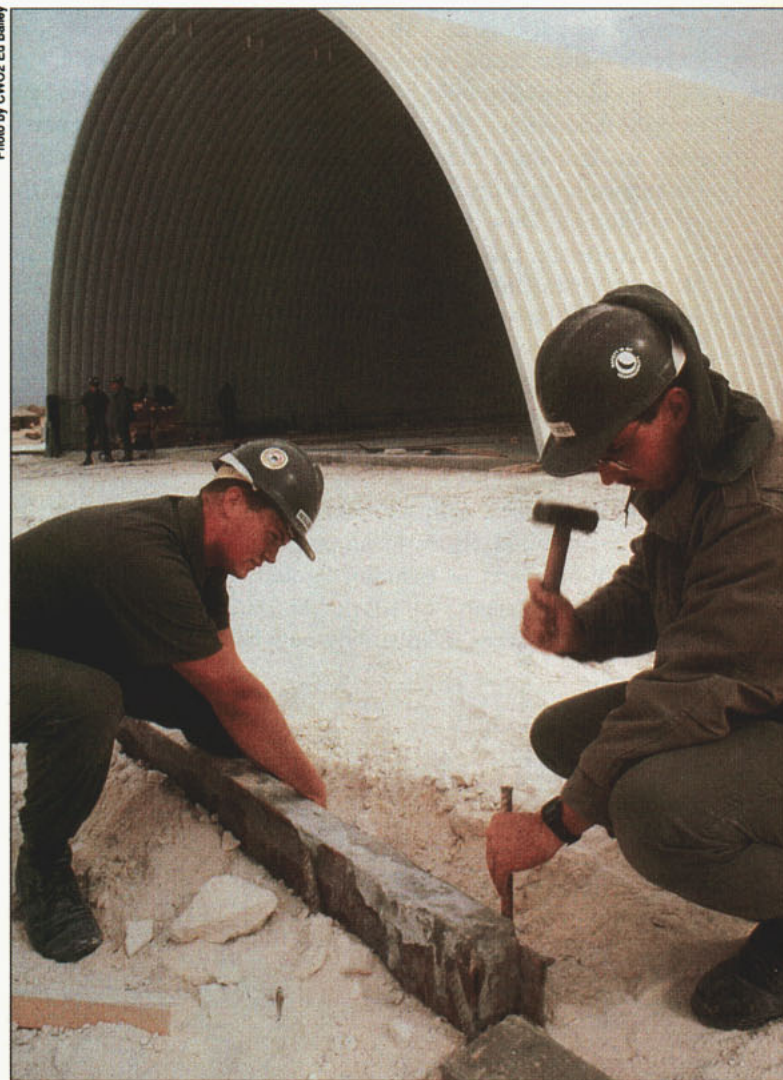
Today's Seabees used the latest in construction materials for aircraft hangars, maintenance shops, berthing, headquarters facilities and other structures needed by troops far from home.

Many of the facilities, unlike their predecessors in previous combat zones, were constructed by new processes such as K-

span. K-span arches are produced when rolls of steel are fed into automatic building machines, allowing a building's shell to be erected 80 percent faster than by conventional means. Fabric membrane structures called "sprung instant" or "clamshells" were also erected.

During *Desert Shield/Storm*, they used more than 7.5 million board-feet of lumber, 92,000 sheets of plywood, 110,000 feet of PVC pipe, 1.4 million feet (262 miles) of electrical wire, 50,000 cubic yards of concrete and 250,000 cubic yards of select fill.

In 36 days the largest multi-battalion force in 20 years, formed by Seabees from NMCBs 1, 4, 5, 7, 24, 40 and 74, constructed the



Seabees from NMCB 5 prepare frames for laying concrete during a February construction project in northern Saudi Arabia.

2nd MEF bed-down. "Wally World" as it was called — officially named the 2nd Marine Expeditionary Force Brigade Marshaling Area — was built using 20,700 cubic meters of concrete.

Wally World consisted of six separate camps. Built to accommodate 2,500 Marines, each "module" covered 50 acres and included 290 17-foot by 33-foot concrete platforms for berthing tents, four 800-square-foot wood frame food preparation buildings, 20 strongback tent frames for other galley facilities and four shower facilities. In addition to running electrical and potable water service throughout the camp, the Seabees also built 20 steel security towers around the perimeter of the 300-acre camp.

Seabee versatility was put to the test in *Desert Shield/Storm*. Heating a 3,000 gallon water holding tank with a 120 gallon hot water heater required ingenuity from the utilitiesmen and construction electricians tasked with providing hot showers to Marines in the Saudi desert. They overcame delays and inadequate equipment to supply 300 shower heads with hot water.

"We had to make do with a fabrication here and there on the unorthodox side of the house," said Construction Electrician 1st Class Roger Riojas of NMCB 40, "but that's one of the other mottos that the Seabees have, 'Make do with what you got.'"

Providing a hospitable home was not the only way the Seabees helped the Marines. They were responsible for building numerous mock artillery pieces and tank turrets and placing them at strategic points to deceive the Iraqi military. This ensured that the Iraqis did not know where the Marines were actually located.

Just after the ground war began, an advance team from the 3rd Naval Construction Regiment entered Kuwait to prepare positions for the 1st MEF command units to move into the following day. The plan, which was not fully executed due to the duration of the ground war, called for Seabees to repair the Al Jaber Airfield, maintain roads within Kuwait, construct enemy prisoner of war camps and finally, move up to Kuwait International Airport to support the Marine divisions there.

This deployment truly substantiated the "mobile" in NMCB. From their initial Saudi locations in the sand at the Jubail industrial area and in Bahrain, through the 300- to 500-man camps at Al Mishab, Al Kibrit, Al Qaraah, Al Khanjar and Kuwait, the Seabees lived strictly on what they could produce.



Photo by CMO2 Ed Bailey

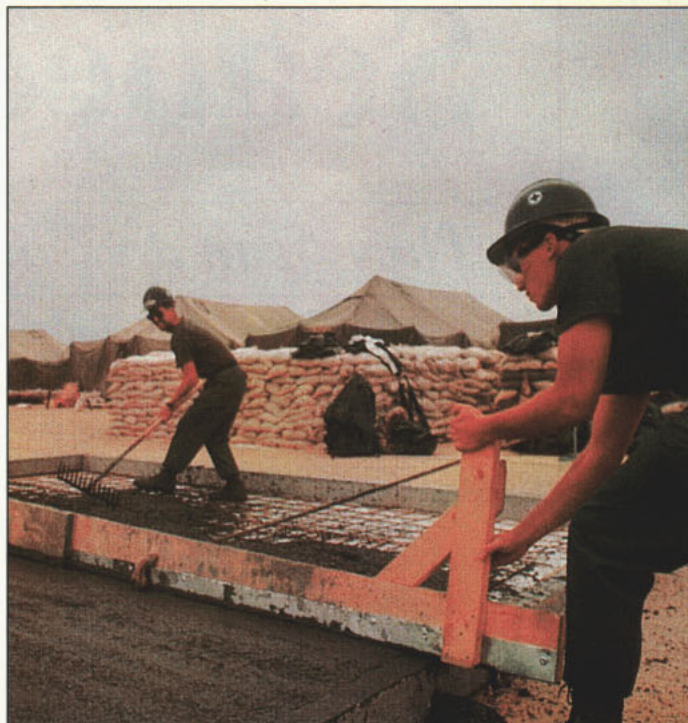


Photo by CMO2 Ed Bailey

Above: BU3 Matthew Hollenbaugh and BU3 Dale Herbert pound stakes to build a concrete wall in northern Saudi Arabia. Below: A Seabee bulldozer moves Saudi Arabian sand to form a defense line near the Kuwaiti border.

Heavy equipment, tons of fuel, supplies and construction materials were transported vast distances over the desert. More than 200,000 miles were logged by one NMCB on supply runs from Jubail to the northern camps with no accidents or vehicle breakdowns, a remarkable statistic generated by remarkable people.

But perhaps their most important contribution was the part Seabees played in what Army Gen. H. Norman Schwarzkopf called the "End Run." While under the gun, both figuratively and literally, the Seabees constructed more than 200 miles of road — a four-lane divided highway in the sand. Striving to deceive the Iraqis about the coalition force's invasion plan, they faced the formidable task of constructing the road network at the last minute. Rising to the challenge, they got the job done — "Can Do" in action.

The Seabees built more than camps and airfields; they built character, making themselves better for the experiences gained in the desert. This, and the mutual admiration developed between Seabees and hundreds of Marine engineers, made a team that was unbeatable in the combat service support arena.

"For some the changes will be drastic; for others the changes will be less noticeable," explained Master Chief Constructionman C.E. Maxwell, NMCB 40's command master chief. "Some will talk more and boast about their contributions, while others will be quieter and will keep their experiences to themselves.

"Some have come to realize what it really means to be 'an American fighting man' in defense of our nation's security interests around the world," Maxwell added. "... For some, the bells of freedom will carry a sweeter sound than they heard seven months ago and the colors of our nation's flag will be brighter. You can be proud of your Seabees — they've done a magnificent job for our country." □



Photo by PH2 William A. Lipski

Combat logistics

The power behind the coalition's punch

An army travels on its stomach," Napoleon is credited with saying. But, surely, he wasn't the first to realize this military truism. Every fighting force that ever hoped to succeed in battle had to have sufficient foodstuffs to carry it through the campaign. Food alone cannot guarantee victory, but a lack of it can guarantee defeat. Just ask Saddam Hussein.

It was true in 1812, 1917, 1945 and it is true today for both armies and navies. The concept not only applies to food, but to guns, bullets, fuel, machinery and parts. If you aren't lucky enough to be waging war near your local naval supply center, you need to bring these items with you.

When President Bush drew his now-famous "line in the sand," it was as if a starter's pistol were fired at nearly every Navy supply center at home and abroad. Ships nearest the Persian Gulf and the Eastern Mediterranean needed to be ready for battle at a moment's notice. Ships at U.S. homeports had to be stocked with all the goods and hardware they and their embarked Marines would need to carry the fight to Iraq, half a world away.

From the beginning of *Desert Shield*, Naval Supply Center (NSC), Norfolk, was

flooded with requests. Dozens of Norfolk-based ships were going to be needed in a hurry. For USS *John F. Kennedy* (CV 67) and her battle group, it meant the 30-day process of loading supplies for a six-month cruise had to be done in four days.

"Sailors were lined up with requisitions from the front desk to the entrance door, and out around the corner of the building," said LCDR Eric Ferraro, Norfolk customer service officer.

Kennedy alone requested some 700 pallets of food. By the time she left, NSC Norfolk had provided the battle group with 2 million fresh eggs, 185,000 pounds of hot dogs, 250,000 pounds of chicken and 400,000 pounds of hamburger. During the first two weeks of August, NSC's fuels division delivered 525,000 barrels of fuel oil to departing ships and squadrons — more than twice the normal amount. NSC did one month of normal business in two days during its furious effort to supply deploying ships and aircraft.

For the Navy, Operations *Desert Shield/Storm* presented one basic logistic challenge: how to coordinate the movement of supplies, aircraft, troops and ships in the smoothest and most expeditious manner in

a small war zone. It is from that challenge that the U.S. Naval Logistic Support Force (NavLogSupFor) was born. Commanded by RADM Robert Sutton, NavLogSupFor was tasked with making things happen in the Persian Gulf.

Setting up a new command is always a difficult undertaking, and with the threat of war looming on the horizon, Sutton and his staff had their hands full.

Because the Navy was operating in "uncharted waters" logistically, the command was created to relieve operational commanders afloat and ashore from the burden of spending valuable time planning logistics. They could concern themselves with winning the war while the logistic support force made sure that supplies were constantly on the move.

Keeping up to 115 deployed ships fully-stocked presented the greatest challenge to Navy logistic planners. Without supply ships, the carriers, cruisers, destroyers and frigates would not have been able to sus-

Above: A CH-46 helicopter from USS *Detroit* (AOE 4) conducts a vertical replenishment over USS *John F. Kennedy* in the Red Sea.

tain their projection of military might.

Once combatant ships arrived in theater, virtually all resupply operations had to be carried out by combat logistic force (CLF) ships, which were supplied through expeditionary forward logistics sites, using the two methods of resupply at sea — underway and vertical replenishment (VertRep).

The dozens of CLF ships deployed during Operations *Desert Shield/Storm*, along with various Military Sealift Command (MSC) and Ready Reserve Force ships, had the monumental task of supplying six carriers, two battleships, two command ships, two hospital ships, 31 amphibious ships and 40 other cruisers, destroyers, frigates, submarines and minesweepers.

One of the ships responsible for keeping battle groups ready to fight was the fast combat stores ship *USS Sylvania* (AFS 2), nicknamed "Vigilant Provider." During her seven-month deployment she steamed more than 35,000 miles providing supplies and services to her customers.

As one of the "on-station" supply ships during *Desert Shield/Storm*, *Sylvania* delivered more than 20,500 tons of supplies, never missing a commitment. Shuttling between advanced supply depots and the fleet, *Sylvania* filled more than 30,000 requisitions, delivering parts and enough food to sustain more than 150 ships with 35,000 sailors and Marines embarked.

In addition to alongside resupply operations, *Sylvania's* embarked helicopter squadron provided VertRep throughout *Desert Shield/Storm*. During the cruise, embarked Helicopter Support Squadron 6, Detachment 4, transferred 5,000 tons of supplies, 915 passengers and 31,000 pounds of mail. The detachment nearly doubled *Sylvania's* rate of cargo transfer, resupplying ships at a distance while other units were alongside. AFSs and other replenishment ships were key players in keeping warships on the move throughout the demanding missions of *Desert Shield/Storm*.

Ships like the destroyer tender *USS Yellowstone* (AD 41) fulfilled another logistic requirement of sustained naval presence. Based in the Red Sea port of Jeddah, Saudi Arabia, she provided critical repair and rearming capability to the fleet. During seven months in the Middle East her crew completed more than 10,000



Photo by PH1(A) Scott M. Allen

repair jobs on 30 U.S. and allied ships. The Navy men and women aboard tenders in the region provided a wide variety of services simultaneously to as many as five destroyers moored alongside.

The women serving in non-traditional roles aboard tenders joined their counterparts throughout the Middle East — nearly 2,500 serving aboard CLF ships, MSC vessels, two hospital ships and ashore at fleet hospitals, aviation and cargo handling detachments — to play a crucial role in the Navy's contribution to *Desert Shield/Storm*.

"Without the quick, reliable service that the officers and crew of *Yellowstone* provided, the ability to sustain three carrier battle group operations would have been severely hampered," said RADM Riley Mixson, Commander Carrier Group 2 and Commander Naval Forces Red Sea.

Jeddah was also the site of the Combat Logistic Stores Facility (CLSF). CLSF Jeddah gave replenishment ships assigned to the Red Sea the ability to restock and rearm without depending on the Suez Canal as their logistics link. The replenishment and maintenance effort both ashore and underway kept task groups sustained on-station throughout *Desert Shield/Storm*, a key factor in keeping Iraq locked in.

"One thing that is always inherent with a battle group is that we're self-contained for a sizeable period of time. We've got our ordnance; we've got our food; we've got our fuel. I think the deterrent value that that represents will always be an important

Above: LT Kelly Franke of HC-2 prepares to fly one of the *Desert Ducks* on a support mission. Opposite page: USNS *Regulus* (T-AKR 292) receives fuel from a supply tanker while carrying troops and equipment to the Middle East.

tool," said VADM Stanley Arthur, commander of *Shield/Storm's* naval forces.

When moving large amounts of cargo in and around a war zone, the threat of terrorism is heightened. Physical security against water-borne attack for three major ports in the Gulf region was one of the first concerns raised during the massive build-up. NavLogSupFor took on the responsibility of coordinating the efforts of the Port Security Harbor Defense (PSHD) force.

Three PSHD groups — made up of a Mobile Inshore Underwater Warfare Unit operating radar and sonar from the pier, a Coast Guard small boat security team and a Navy explosive ordnance disposal (EOD) diver unit — operated 24-hours a day in vital harbors on the Persian Gulf.

The ports in Bahrain, along with those in Jubail and Dammam in Saudi Arabia, were key to the coalition's success as they received and transferred tanks, troops, ammunition and other supplies for coalition forces. A successful strike on any one of these ports would have done more than damage morale — an attack could have seriously disrupted vital supply lines and decreased the effectiveness of the air and ground war.

Resupplying ships at sea and protecting port facilities was not the only concern of

the logistics team. Support was essential for land-based Marines and sailors as well.

Desert Storm Marines depended on their Force Service Support Group (FSSG) to provide a full range of services, which included 50,000 gallons of water daily to thousands of parched Marines stretched across hundreds of miles, meals-ready-to-eat, camouflage netting and other gear to troops in theater.

Engineering and construction detachments also built wood-frame tents, cleared and leveled runway aprons and supported other services. They also spent time training the Saudis how to build defensive positions and survivability sites.

The Motor Transport Marines had a difficult time supplying reliable transportation. Marine Warrant Officer Mark Foreman, motor transport officer, explained that, "The sand breaks down filters and seals faster than normal, and the rough terrain shakes a lot of nuts and bolts loose."

But for the motor Marines, it seemed no problem was too fine or gritty to correct, and the vehicles were maintained as best as they could have been in the desert.

Sgt. Peter Abdallah summed up the feelings of a lot of Marines in FSSG. "There are a lot of people counting on us, but we feel prepared to handle whatever missions we are called upon to do."

Logistics support was also the job of sailors from Naval Mobile Construction Battalions, Cargo Handling Battalions, Navy Overseas Air Cargo Terminal units and Forward Freight Terminal units. Seabees and cargo handlers were among the first to arrive in the Saudi Arabian desert to prepare for the largest deployment of forces since Vietnam.

Within 48 hours of President Bush's order, detachments of cargo handlers, the "combat stevedores," were airlifted to participate in off-loading supplies and equipment from maritime pre-positioning force ships.

This massive effort involved moving more than 2,400 people and nearly 40,000 tons of equipment and supplies.

But offloading was just the beginning as Seabees built mini-cities in the desert, expanded airfields and set up berthing facilities, ammunition storage points and roads to provide the cornerstone for force structure in the desert.

Seabees were also involved in the direct support of the ground assault. Their task was to establish a Naval Construction Force Logistics Support Base to provide the 1st Marine Expeditionary Force (MEF) support needed to attack Iraqis in Kuwait.

The road network needed to support Schwarzkopf's legendary "end run" was

undoubtedly the most important task facing the Seabees. The need to deceive the enemy made the task even more difficult because it necessitated last-minute construction. The end run ultimately required more than 200 miles of four-lane divided highway over the sand.

According to Marine Lt. Gen. Walter E. Boomer, commanding general, 1st MEF, "The Seabees are doers, not talkers."

To support the aviation side of the mission, airfields in Saudi Arabia and Bahrain were put into operation and a logistics air force of 25 dedicated helos and fixed-wing aircraft was created.

"One of our helos, an H-53 from HC-1 [Helicopter Combat Support Squadron 1], was one of the first aircraft from the coalition forces to land in Kuwait City after the liberation," Sutton said. "Within two days of that event, we were making regularly scheduled flights into the pier at Al Shuaiba, the main port for the country of Kuwait, to support the EOD mine-clearing efforts going on up there."

The Navy-Marine Corps logistics establishment is one of the largest, most expedient supply networks in the world. Operations *Desert Shield/Storm* proved that America can project, and more importantly, maintain a potent sea and land force thousands of miles from U.S. shores.

"If the Persian Gulf crisis has proved anything," said *Washington Post* columnist David S. Broder, "it is that we bought a lot more in the military buildup of the 1980s than the overpriced toilet seats Pentagon critics held up to constant ridicule. That buildup gave us an airlift and sealift capacity that made this deployment a logistic miracle, a Navy that was able to impose a blockade on Iraq and the active and reserve forces ready to undertake a mission no one had anticipated."

And that mission is far from complete, with the massive task of redeployment underway, the entire logistic infrastructure will be working to finish the job long after the war fades from TV screens and newspaper headlines.

"There is a saying in the U.S. Navy logistics community," said RADM Nick Gee, commander of Cruiser Destroyer Group 8, "the difference between a naval battle force that comes to play and one that comes to stay is logistics." □

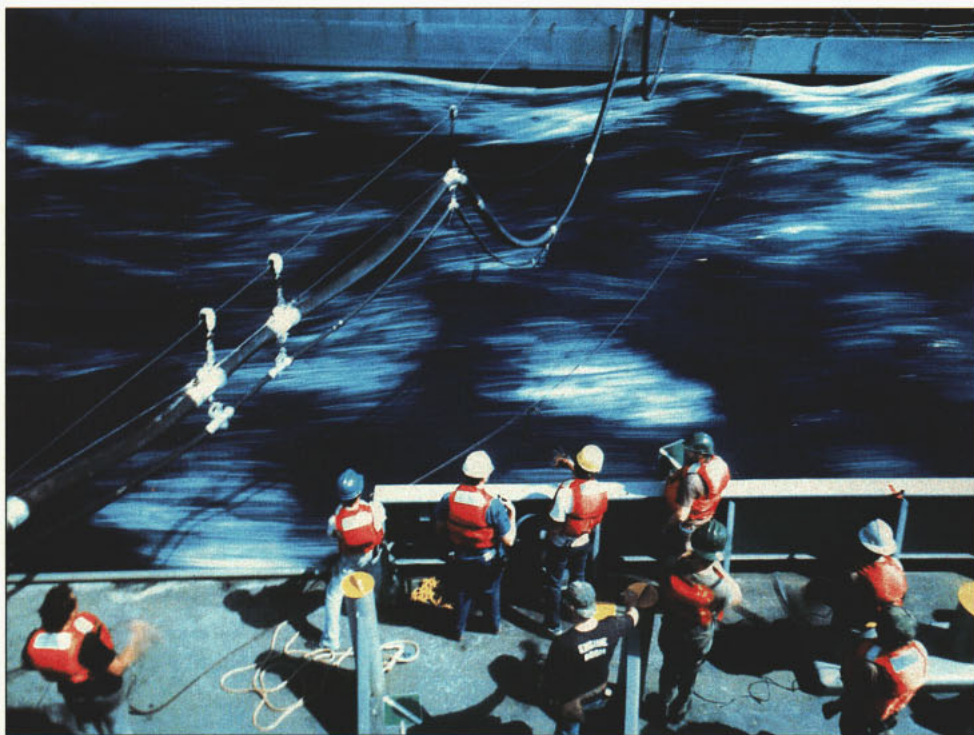
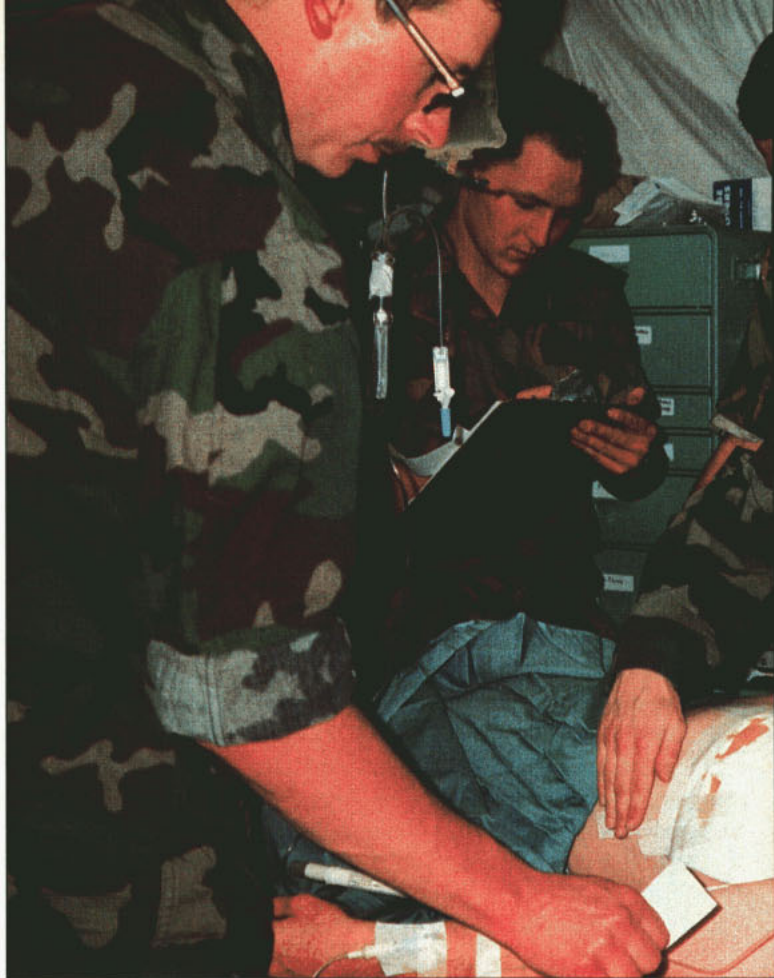


Photo by PH1 (A) Scott M. Allen

The total force

Reservists hit the ground running



The reservists came; they did their job. No one really noticed anything unusual. It was total integration. That's what "Total Force" is all about.

The call-up of reservists in support of Operations *Desert Shield/Storm* marked the first time a President involuntarily recalled reservists since the Korean War. On Aug. 22, 1990, President Bush issued the first executive order authorizing the call-up of 48,800 men and women of the Selected Reserves to active duty.

Subsequent executive orders increased the authorization to 360,000 for all the services. Of those, the Navy and Marine Corps were each allowed a ceiling of 44,000. Neither service used its full authorization, but those called to duty in the Persian Gulf and at home were used effectively, working and fighting in harmony with their active-duty counterparts.

The more than 21,000 naval reservists and 31,000 Marine Corps reservists who were actually called not only joined active-duty units in and around the Arabian Peninsula, they also filled critical military support positions in the United States and overseas caused by regular active-duty deployment to the Middle East. These

citizen-sailors and -Marines were able to step right in without missing a beat.

Chief of Naval Operations ADM Frank B. Kelso II said that *Desert Shield/Storm* "shows me that reserves can back up our active-duty forces in real crisis situations and that our plans under that Total Force concept are realistic."

"*Desert Storm's* smooth integration of reserve combat, combat support and combat service support units into the active forces has proven the viability of our integrated training and exercise programs," said Commandant of the Marine Corps Gen. Alfred M. Gray. "Our reserve forces are a key component of our warfighting capability."

As events unfolded in the Persian Gulf, it became increasingly difficult to distinguish a "regular" from a "reservist." Some mission specialties were performed solely by reserve forces. The Naval Reserve provided the Navy's only capability in many areas, including dedicated combat search and rescue, mobile inshore undersea warfare and logistic air transport.

"Along with our sister squadron, the Helicopter Combat Support Special (HCS) Squadron 4 'Red Wolves,' we are the only

Navy assets — regular or reserve — whose primary mission is to provide dedicated combat search and rescue capability for Operation *Desert Shield*," said CDR Charles A. Erickson, HCS-5 commander.

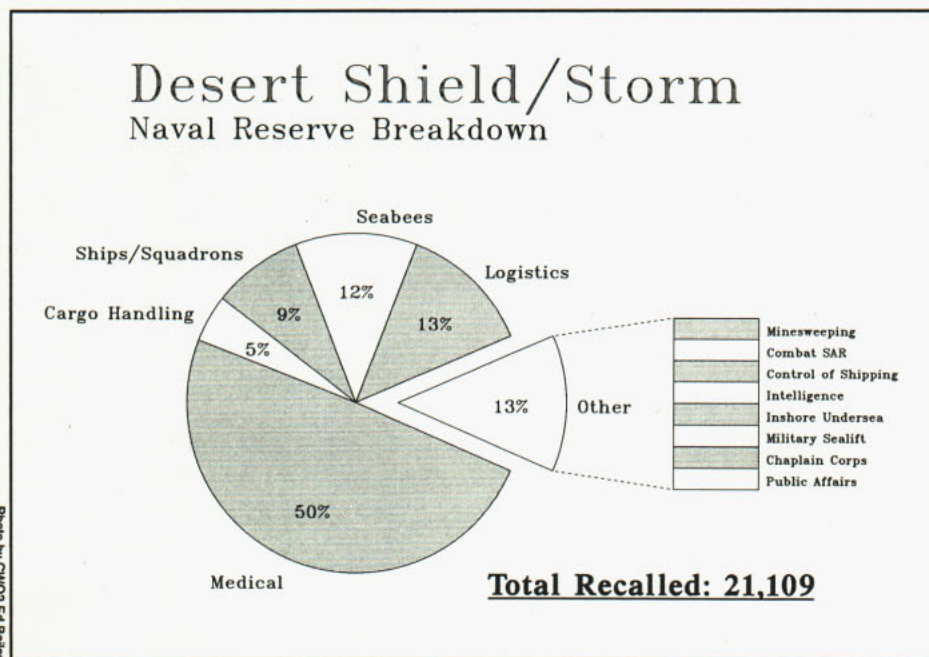
Helicopter Support Squadron (HS) 75 also played a key role in Search and Rescue Operations. In Diego Garcia, a B-52 with six crew members on board was forced to ditch after it developed severe mechanical problems. The rescue helicopter was airborne within minutes and arrived at the crash site approximately 40 minutes after receiving the call for help. The reservists quickly spotted and rescued three survivors.

Reserve Mobile Inshore Undersea Warfare units (MIUWU) provided 100 percent of the Navy's harbor surveillance and port security. "This unit is unique because we don't have an active-duty counterpart," said CDR Edward J. Pierce, executive officer, MIUWU 202.

Naval air reserve fleet logistic support (VR) squadrons provide the Navy with 100 percent of its medium/heavy U.S.-based air logistics support capability. During *Desert Shield/Storm*, four recalled VR squadrons carried more than 6,100 passen-



Reservists at Fleet Hospital 6 keep prepared through casualty drills with coalition soldiers. Nearly one-half of all recalled naval reservists during *Desert Shield/Storm* were from the medical field.



Graphic by JO2 Paul A. Mince, USNR

Photo by CM02 Ed Bailey

gers and 4 million pounds of cargo to Southwest Asia. The squadrons logged more than 4,100 flight hours.

However, the majority of reservists augmented their regular counterparts. They came from all parts of the country, representing most specialties: medical, naval construction, cargo handling, mine warfare, naval control of shipping, intelligence, public affairs and the chaplain corps. Reservists made significant contributions, and training and experiences were shared between them and their active-duty shipmates, enhancing the skills of both groups by the time the crisis was over.

Medical personnel composed the largest number of any specialty recalled — approximately 50 percent of the naval reservists. Not only did they provide timely, critical augmentation needed to sustain patient care capability at more than 18 CONUS medical treatment facilities, they also provided staffing for two self-contained, 500-bed fleet hospitals. In addition, reserve medical specialists and support personnel augmented the hospital ships USNS *Mercy* (T-AH 19) and USNS *Comfort* (T-AH 20), doubling their patient care capability.

"The quality of the reservists represented the best of academia and private practice," said CAPT (Dr.) Taylor Cook, Navy Central Command force surgeon.

As many as 265 naval reservists deployed aboard *Mercy*. For them, the mobilization was a significant learning experience. "There's a lot more available in civilian hospitals," said LT Berta Kaemmerling, a naval reservist deployed aboard *Mercy*. "Here, you do the best you can with what you have. But I've learned more here than I ever could have learned in a civilian hospital. The knowledge that is available for the taking on this ship is unbelievable."

The famous Seabee "can do" spirit was amplified during Operation *Desert Storm*. About two-thirds of the Navy's construction force are reservists. In all, more than 2,800 reserve Seabees were called to active duty in response to the Gulf crisis. At the cessation of hostilities, 24 percent of all Seabees on active duty and 34 percent of the Seabees in the Persian Gulf area were naval reservists.

Two Seabee reserve units, Reserve Naval Mobile Construction Battalions 23 and 24, deployed to the Pacific Fleet and *Desert Shield/Storm* theater of operations. Infor-

mal feedback indicated that they performed every bit as well as their active counterparts because their hands-on experience in the craftsman trades allowed for a quick transition to a highly productive force.

The reserves provided 90 percent of the cargo handling battalions' capability in *Desert Storm*. Reserve Cargo Handling Battalion (RCHB) 3 found itself on a routine training exercise that turned into an actual operational commitment. Tasked with loading the vehicle cargo ship USNS *Mercury* (T-AKR 10) in port at Guam, the crews worked around-the-clock so the ship could set sail for the Persian Gulf.

As soon as *Mercury* departed, another Military Sealift Command ship, the chartered MV *Maersk Constellation*, arrived and was also under critical time constraints to get her cargo off and deploy in support of *Desert Shield*. "It would have taken at least 10 days to offload her without the help of RCHB 3, and we projected at least six days with their help," said CAPT Eugene Trimpert, commanding officer of Naval Supply Depot, Guam. "What we did not expect was the efficiency of the unit -- they helped get the work done in an amazing three-and-a-half days."

Right: USS *Avenger* (MCM 1) and USS *Adroit* (MSO 509), a Naval Reserve Force ship, demonstrate the total force concept working together in *Desert Storm*. Below: Reserve Seabees construct casings for stowing bombs prior to shipment to Saudi Arabia.

Marine Corps reserve units enjoyed the same kind of success and mutual respect in their relationships with active-duty counterparts. Reserve leathernecks reinforced active Marine expeditionary forces and combat support elements. Reservists from infantry, tank and engineering battalions joined with artillery batteries and aircraft squadrons to sustain the warfighting capability of the actives.

"Quite frankly, from the Marine expeditionary force (MEF) perspective, we couldn't have done it without them," said Marine Lt. Gen. Walter E. Boomer, commanding general, 1st MEF.

Reserve infantry battalions were assigned a security support mission for enemy prisoners of war (EPWs). The reservists handled approximately 8,500 EPWs — some of them (EPWs) surrendering in groups numbering hundreds or thousands.

Reserve artillery batteries took part in the relentless pounding of Iraqi troops all along the border. They supported assault elements involved with the destruction of Iraqi multiple rocket launching systems and the neutralization of the Iraqi force.

One reserve tank battalion destroyed 59 tanks — 30 kills were recorded in a single engagement with a Republican Guard unit that lasted slightly more than 90 seconds.

Reservists were also major participants and contributors to the success of *Task*

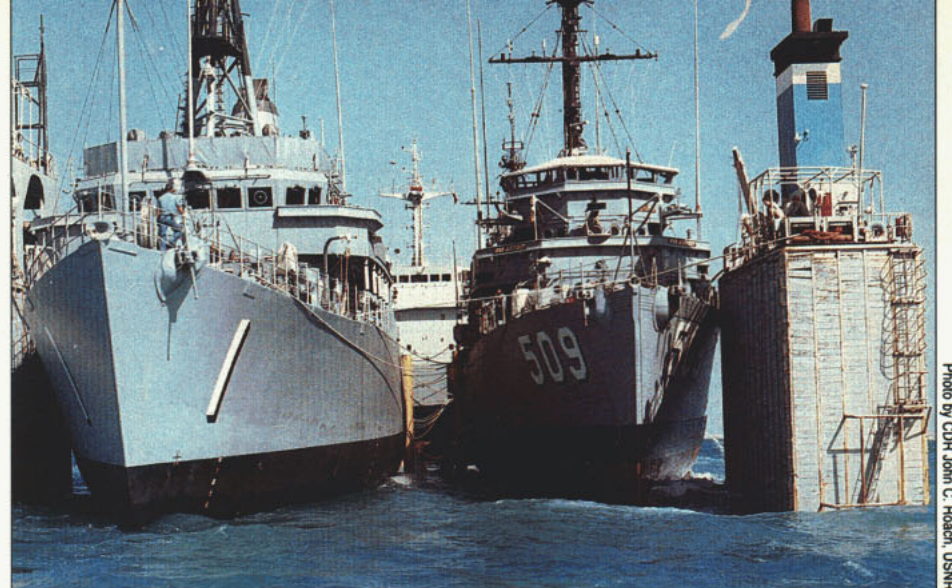


Photo by CDR John C. Roach, USNR

Force Troy, the Marine's deception force. *Task Force Troy* operated to deceive the enemy regarding the exact time and place of the breach of enemy lines and in what force. This was accomplished in part by use of mock-up tanks; aggressive offensive actions such as artillery, mortar and air raids; tank noises at night; and phony VIP visits. During this period, "each reserve unit was a credit to its parent unit and a contributor to its adopted unit. Each one was simply superb," Boomer said.

Perhaps in no other Marine Corps component did reservists play such a large part as within the combat service support element. Transportation, communications and other support services were strained to the limit.

Marine Corps motor transportation assets, normally designed to support a force beachhead up to 60 miles inland, were required to be moved over an operating area of 200 miles. Communication systems were also inadequate because neither personnel nor

equipment assets met the requirements as the Marine Corps forces in Saudi Arabia grew. Trained reserve communicators with their repair equipment did an outstanding job to help patch this overburdened system.

Reservists were a vital link in overcoming these logistic support problems to supply food, fuel and ammunition to forward combat service support units. Reserve civilian skills again proved a tremendous asset. For instance, reserve warehousemen quickly set up excellent supply dump management procedures based on commercial warehousing practices.

Marine Col. Alex Powell, commanding officer of Direct Support Group 1, said the reservists proved every bit as proficient as his active duty Marines. This statement epitomized the Total Force story for both Navy and Marine Corps.

Operations *Desert Shield/Storm* validated the Total Force policy and underscored the importance and reliance our nation places on our reserve components. Reservists proved a ready and effective force for national security. They also proved they are ready to provide critical skills whenever and wherever needed.

"The most important lesson learned from Operation *Desert Storm* was that the system worked," said RADM James E. Taylor, director of the Naval Reserve. "Our reservists were ready, well-trained, they did their job and they were highly motivated. We have proven that the investment we made in the past decade paid off — our taxpayer's dollars have been well spent. The reservists hit the ground running, and I think the American public appreciates what they did for the country." □



Photo by PH1 Dale Scherling

Navy medicine

Deploying the best to prepare for the worst

Shortly after Iraqi troops rolled into Kuwait, Navy medical teams began setting up shop in Saudi Arabia. From the corpsmen in the field to the hospitals stateside, Navy medicine proved itself ready for any eventuality.

More than 6,100 active-duty men and women were sent to the Middle East to provide medical care to coalition forces serving in *Desert Shield/Storm*. In addition to these professionals, some 9,700 naval reservists were recalled to active duty, many of whom filled large staffing gaps at medical facilities where manpower was cut to the bone by *Desert Shield's* massive deployment. Others served on the hospital ships and fleet hospitals already on station.

All of them, active and reserve alike, were in place and ready for action as soon as the call came; ready to care for the casualties of war. They put a structure of care in place which assured the best possible treatment for all people in the combat zone.

In this war, as in others before it, the first point of care for the sick or injured was the field corpsman. Traveling alongside the Marine platoons, these Navy medics provided the vital on-scene emergency and life-saving care that often made the difference.

The corpsman's job is to make battlefield medical examinations and evaluations to determine treatment. Corpsmen are also skilled in emergency techniques, such as maintaining a patient's breathing airway, controlling bleeding, treating shock and preventing further injury.

The "doc," as he's known to most Marines, faces the same dangers and rigors as the Marines he serves with. No one is more aware of this than Hospitalman Clarence Dean Conner of Hemet, Calif., who was awarded *Desert Storm's* first Purple Heart.

"Doc" Conner was listed as an official U.S. ground force casualty after his 1st Marine Division unit was shelled near Khafji by Iraqi artillery Jan. 17. Along with Conner, who had a three-inch hole torn in his shoulder by shrapnel from an Iraqi artillery shell, two Marines were also injured in the attack.

"I felt kind of bad for 'cheesing out,' for leaving the team," Conner said after being evacuated to Fleet Hospital 5. The bond

between corpsmen and Marines runs deep. "They said, 'Don't worry. You got hurt. If anyone else got hurt, they'd be doing the same.'"

More than 5,800 hospital corpsmen served with Marines during *Desert Shield/Storm*. Eleven corpsmen were attached to each company of Marines. Assigned to a Marine unit for the length of their Fleet Marine Force tour of duty, the corpsmen historically gain the trust of other unit members, becoming an integral part of the team.

After being treated by the corpsman in the field, many of the sick and injured were transported to a battalion aid station.

The aid station provides the patient a physician's skills and clinical judgment. They can provide treatment in a safer environment with sufficient time to accomplish a more complete examination.

Lifesaving treatments, such as splinting, bandaging and providing intravenous fluids and antibiotics, are done at the battalion aid station. This prepares the patient to return to duty or for transfer to other medical facilities.

The next step in the combat treatment ladder was a medical battalion surgical support company or a casualty receiving and treatment ship. Here patients were treated by teams of physicians and nurses sup-

ported by a staff of medical technicians with more complete medical facilities, including a basic laboratory, holding wards, a pharmacy and greater surgical capacity. This phase of medical care is intended to perform emergency procedures that are necessary to prevent death, loss of limb or a serious loss of body function.

Those casualties requiring even more definitive treatment were then transported to either a combat zone fleet hospital or a hospital ship. The scope of treatment available at these facilities mirrored fully-staffed hospitals "back home."

FH 5 was the first of these facilities deployed to Saudi Arabia. Springing up in just 16 days, with help from Construction Battalion Units 411 and 415, FH 5 saw its first patient five days after construction began.



Photo by PA1 Chuck Kambach

Among the first ships deployed in support of *Desert Shield/Storm* was USNS *Mercy*, a 1,000-bed "floating hospital" lay-berthed in Oakland, Calif.



U.S. Navy Photo

The entire facility began as more than 400 crates, called ISO-containers, off-loaded from the afloat pre-positioning ship *MV Noble Star*. In less than two weeks, medical and support people from Naval Hospital Portsmouth, Va., and the Seabees, had transformed the containers into a 500-bed, forward-deployed medical facility. Complete with operating rooms, intensive care units and radiological facilities, FH 5 offered an air-conditioned oasis from the harsh desert heat for its patients.

The quonset-hut shaped tents of the hospital's canvas and nylon mobile units soon spread out over 28 acres of tarmac near the Saudi port of Jubail. Though daytime temperatures often climbed above 130 degrees, the staff worked fervently to get the hospital up and running under the threat of imminent hostilities.

FH 5, along with FH 6 and FH 15, which were set up in late January, cared for more than 32,000 patients during Operations *Desert Shield/Storm*. Members of coalition forces, expatriates, EPWs and Kuwaiti refugees received care.

"Nobody has ever set up a hospital this size before," said CAPT (Dr.) Gregg Parker, a Navy surgeon at FH 5.

Of the thousands of patients seen at FH 5 nearly 600 surgeries were performed, and the hospital's dentists attended to more than 3,100 people. The pharmacy filled nearly 22,000 prescriptions during FH 5's seven-month deployment to Saudi Arabia.

FH 6 and FH 15 exemplified the "total force" concept, officials said, demonstrating how Naval Reserve units could be recalled to active duty and hit the ground running.

In all, more than 1,800 reservists were called up from Fleet Hospital Unit (FHU) 22 in Kansas City, Mo., and FHU 20 in Philadelphia, providing nearly all of the people necessary to staff both facilities.

While fleet hospitals worked in the Saudi sand, Navy hospital ships operated in the Persian Gulf, Red Sea and Gulf of Oman. Both ashore and afloat, the Navy provided the most complete medical facilities in theater, offering the best care of all branches any nation's military in theater.

Among the first ships deployed in support of Operation *Desert Shield* were USNS *Comfort* (T-AH 20) and USNS *Mercy* (T-AH 19), the only hospital ships of their size in the world. These 1,000-bed "floating hospitals" stood at the ready throughout *Desert Shield/Storm*, prepared at all times to treat casualties.

"You won't find a crew anywhere that is more delighted to have spent so much time being bored," said CAPT (Dr.) Paul



Barry, commander of *Mercy's* Medical Treatment Facility (MTF). "Being bored was a good thing for people in our position."

While "business" was slow, the ships' crews were not without things to do. During their stay in the Gulf, the doctors, nurses and corpsmen of the hospital ships saw more than 1,350 inpatients and 14,000 outpatients, treating everything from dehydration to serious trauma, including burns and head injuries.

In addition, *Mercy* provided a fully-staffed hospital to evaluate 21 American and two Italian former Prisoners of War (POWs) following their release from Baghdad.

"This justified our whole reason for being out here," HM2 Mark Busam said of treating the POWs. "The ship has a place in history now ... I felt really proud just to be around these people."

The hospital ships have 50 trauma stations that form the casualty receiving area, 12 operating rooms, a 20-bed recovery room, 80 intensive-care beds and 16 light- and intermediate-care wards. These ships are part of Military Sealift Command (MSC) and are maintained during peacetime in a reduced operating status by crews of civilian mariners and a naval cadre of 40 crewmen. *Comfort*, homeported (or layberthed as it's referred to by MSC) in Baltimore, and *Mercy*, homeported in Oakland, Calif., both steamed toward the Middle East within a week of being activated on Aug. 10.

"*Comfort's* cadre crew performed magnificently in preparing for the ship's departure," said CAPT (Dr.) Roger J. Pentzien, *Comfort's* MTF commanding officer.

When the fighting started, the hospital ships were on station



Photo by CWO2 Ed Bailey

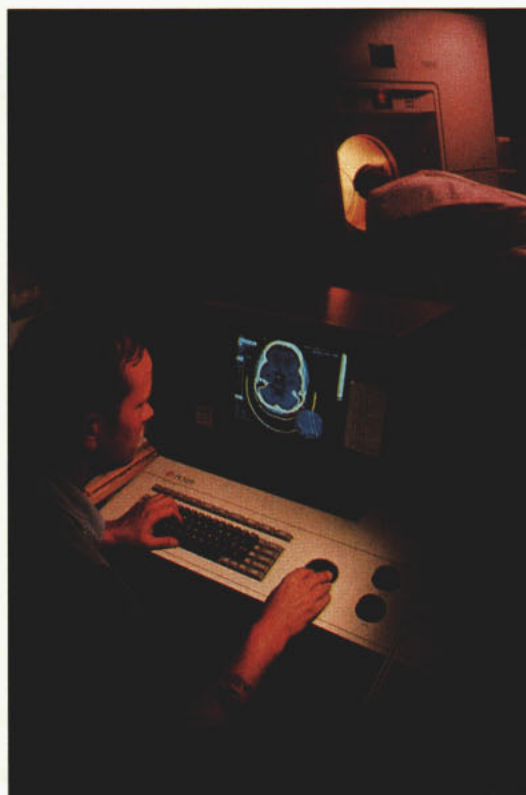


Photo by JO1(SM) Joe Galowicz

and ready. Armed only with three red crosses painted on their hulls, the ships anchored within helicopter range of shore to provide timely and thorough medical care to ground forces.

Navy medicine was ready stateside too. All Navy medical treatment facilities geared up to receive casualties from Operation *Desert Storm* if the need arose. In cooperation with the other armed services, the Navy designated certain hospitals to be casualty receiving centers (CRCs).

The CRCs were set up to receive patients from all services as they were medevaced stateside. Patients would then be transferred to facilities near their duty stations, if available and as soon as possible, to ensure appropriate medical care.

Many of the things Navy medical personnel did in *Desert Shield/Storm* were significant firsts, but their tradition of quality care never wavered from the norm.

"Navy medicine's reason for being is to provide medical care to Navy and Marine Corps personnel," said VADM James A. Zimble, the Navy's surgeon general. "Any time our fighting forces go in harm's way, you can be certain that medical people will be on the front lines as well, both afloat and ashore."

The pride and professionalism displayed by the Navy medicine team throughout the Gulf crisis proved that they stand ready to serve the sailors and Marines who serve their nation — wherever and whenever they may be called to serve.

"We were happy to be there," said HM3 John Pino from *Comfort*. "We were ready no matter what happened to save lives. We were even happier not to have to." □



Photo by JO1(SM) Joe Galowicz

Top left: Nearly 600 surgeries, like this one at FH 5, were performed at the Navy's three fleet hospitals. Center: Medical personnel treat a Marine suffering from eye irritations as a result of smoke from burning Kuwaiti oil wells. The care was provided shortly after the start of the ground offensive. Top right: HM1(SW) Paul Gunther operates a CAT scan aboard *Comfort*. Lower right: From nurses and doctors to corpsmen and support staff, the men and women of Navy medicine provided the highest quality treatment for coalition forces of any military service in theater.

Protecting the *Shield*

Preventive medicine kept them fit to fight

Navy medical teams won several victories during Operations *Desert Shield/Storm*, including battles against unseen enemies.

Thanks to the efforts of preventive medicine specialists who served with Marine Corps forces and the programs and education these specialists provided, the war against heat and disease was won with few casualties.

Disease and non-battle injuries, which in past wars have seriously impaired troop readiness, were kept to an all-time low in the war with Iraq.

"Although Operation *Desert Shield/Storm* was not disease free," said CAPT (Dr.) William F. Bina, the preventive medicine advisor to the Navy's Surgeon General, "a new standard has been set in our ability to maintain a healthy force during a major conflict."

Officials reported the rate of hospital admissions due to disease in *Desert Storm* was less than 50 per every 1,000 patients. That statistic is extremely low when compared to the numbers of troops afflicted with disease in the Middle Eastern theater during World War II — 917 per every 1,000.

Officials credit the disease and non-battle injury success to strong operational support for the preventive programs, as well as the efforts of the individual preventive medical specialists.

Marine commanders on the ground followed medical guidelines and made sure water discipline, acclimatization, sanitation guidelines and work/rest cycles were a priority among the troops.

As a result, incidents of heat illness were kept to a minimum, and no excessive heat stress problems or major outbreaks of disease were reported. The few outbreaks which did occur were controlled immediately.

The day-to-day attention given to various preventive medicine regimens, such as food and water sanitation and vector (bug) control, kept disease problems equally low.

CAPT (Dr.) William M. Houk, head of the Navy's Bureau of Medicine and Sur-

gery's Readiness Cell, said preventive medicine specialists were prepared to deal with casualties in the hundreds. Instead, they were handling numbers in the 10s and 20s. He said preventive medicine teams serving in *Desert Storm* began educating troops about heat, disease and local "critters" even before they arrived in the Saudi sands. Their goal was to keep the troops from ever needing the care available at other medical platforms.

Preventive medicine technicians, environmental health officers, and medical entomologists, like other medical support personnel, are routinely deployed with the fleet and Marine Corps forces. To augment the staffs already in theater, several vector control and preventive teams were deployed to *Desert Shield/Storm*. During the war, more than 160 preventive medicine specialists were ashore, while others served aboard the Navy's two hospital ships.

The medical warriors investigated disease outbreaks, conducted disease surveillance, monitored the implementation and effectiveness of the preventive programs throughout the theater and provided advice to the U.S. Navy Central Command force surgeon on preventive issues.

Central to their success was the Navy forward laboratory, which was in place as quickly as the hospital ships and fleet

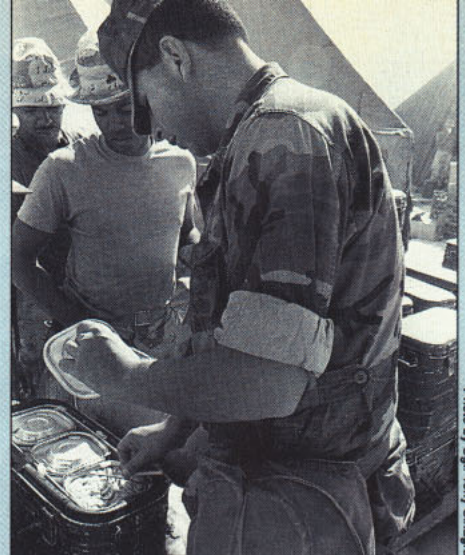


Photo by Sgt. Tony Shagran

hospitals. The lab is designed to provide rapid diagnostic capabilities for infectious disease and biological warfare.

The Navy Environmental and Preventive Medicine Unit in Naples, Italy, had a pre-tested field lab ready for transport within six hours of the NavCent request. The lab was on the ground in Saudi Arabia within 72 hours.

After the end of offensive combat operations against Iraq, the lab's staff was busy supporting sailors and Marines who worked to restore public health services in newly-liberated Kuwait. Navy preventive medicine efforts helped avoid the weakening of the coalition's *Desert Shield* and kept *Desert Storm*'s thunder rolling. □

Above: HM2 Bob Fernandez checks a vat full of Marine Corps evening chow. Below: HM2 John Roarty adjusts the nozzle on his ultra-low volume sprayer before spraying to guard against pests.



Photo by Sgt. Tony Shagran

Homefront support

As thousands of sailors, Marines, airmen and soldiers put their lives on the line in Operations *Desert Shield/Storm*, millions of Americans played a vital role in the liberation of Kuwait by fighting and winning another battle — the battle of support for U.S. fighting forces answering the call in the Middle East.

At first, support was muted by headlines in newspapers and magazines across the country hinting of another Vietnam. Small cells of anti-war protesters moved to mirror the marches of more than 20 years ago.

The "Vietnam Syndrome" evoked troublesome memories of one of the most divisive periods in our nation's history. While Congress debated policy last August and increasing numbers of service men and women were being deployed to a possible war zone, individual Americans made a collective decision to put the so-called Vietnam Syndrome to rest.

President Bush was the catalyst for the growth of support. "This is now the time for Americans to support their troops," he said. "Even if you don't support the policy ... support them, for they are giving you the chance to be free and voice your feelings."

The result was a groundswell of patriotism that swept across the land, galvanizing support for the troops. There were marches, rallies and special songs. The colors of patriotism were red, white and blue — and yellow. As far as the eye could see, America was bursting with color and activity.

Supporters ranged from moms and pops to movie stars; sports celebrities to college students; professionals to every-day Americans. This verbal muscle and encouragement kept troop morale high and allowed a confidence to emerge, enabling the mission to be completed without obstacles other than the Iraqi forces.

By January, this appreciation and understanding for the men and women of *Desert Shield/Storm* had swelled. From the half time show at the Super Bowl to hometown parades in Anytown, U.S.A., patriots came out in droves.

Professional and college sports teams proudly displayed American flags on their uniforms and pasted decals of support on headgear. Miami Dolphins head football coach Don Shula sent a letter of greeting and gratitude to troops in the desert. High-profile musicians like rapper M.C. Hammer, who dedicated his recent Grammy award to the troops, joined the rallies. Senators and congressmen showered praise on service men and women, hailing them as heroes.

"The thing I see most is that people actually are caring about one another again in America," said one supporter during a large pro-troop rally in Pearl Harbor. "A unity among the people ... people have a sense of caring about their country again and

believe in it. ... This won't be like another Vietnam."

As the war progressed, so did the level of public support. Television personality Willard Scott and the United Services Organization urged viewers to "adopt" a ship or platoon by sending "We Support You" T-shirts and personal messages overseas. At the Daytona 500 stock car race, five drivers each "adopted" a military branch and painted their cars accordingly.

Across the country, hometown support from city to suburb was unwavering. Yellow ribbons sprouted overnight, adorning shirt collars, front doors, fences, trees, light poles, street signs and automobiles. Businesses painted their storefront windows with slogans like "U.S. Troops — true American heroes."

Groups banded together spontaneously to promote recreation and morale of the troops. Project *Desert Read*, based in Arlington, Va., shipped more than 23,000 books to the desert in an effort to head off boredom and ease the tension during the uncertain time before the war. Operation *Desert Cookie* provided home-baked sweets to troops transiting Naval Air Station, Sigonella, Italy, and other logistics hubs, bound for the Gulf.

In Hollywood, more than 100 celebrities, including Ted Danson, Meryl Streep, Michelle Pfeiffer, Mike Tyson and Academy Award winner Kevin Costner, gathered to record and videotape "Voices That Care," an anthem dedicated to the troops in *Desert Storm*. Veteran entertainer Bob Hope taped a Christmas special at NAS Bermuda, then visited troops in the desert. Additional USO-sponsored tours included visits by Jay Leno, Gerald McRaney, Delta Burke, Steve Martin and Victoria Tennant.



Rallies formed around the nation in support of the troops serving in the Middle East soon after President Bush's Aug. 8 deployment order for *Desert Shield*.



Left: Diane and Nancy Zigabarra sew red, white and blue ribbons in front of a photo of Marine Sgt. Michael Zigabarra. The women began sewing the ribbons Aug. 15, in support of service members in the Persian Gulf. Right: Four second-graders from Mary Calcott School in Norfolk prepare a Valentine's Day poster for their loved ones aboard the hospital ship *Comfort*.

Across America people tuned in, listening to radios, reading newspapers and watching as the latest details of the war were beamed by satellite before their eyes.

Everyone shared in the pain and violation of Kuwait. When the call came and the troops were sent off to war, Americans were armed with an understanding of what had to be done — one that spread to the troops themselves.

"When Saddam opened up the gates of those oil spigots, well, the man is a cancer ... he needs to be removed ... it's just environmental terrorism," said Fire Controlman 3rd Class Richard Vaker in Pearl Harbor.

The confidence of the American people reached new heights as they grew to understand the creed of the military members.

This dedication and sacrifice by more than one half-million American fighting men, women and their families sparked a flame held high by millions of friends on the homefront.

Marine Corps mother Nancy Zigabarra and her daughters, Diane and Debra, sewed more

than 6,500 red, white and blue ribbons onto safety pins and passed them out to friends and neighbors in Los Angeles. Sitting at the dining room table, they turned out the ribbons at a rate of 40 to 50 per hour, because, said Zigabarra, "We wanted to do something to let the service members know we care."

A seven-year-old Florida girl, Christy Clements, was so moved by TV reports about the effects of desert heat on the troops, that she used her Christmas money to buy a case of *Gatorade* and send it to the Marines deployed to the desert. The video generation of school children swapped their computers for a pen or pencil and wrote to "Any Service Member" by the thousands. One girl wrote, "You are not forgotten. We are praying for you. Enclosed is some Kool-Aid and a stick of gum."

From the first days of *Desert Shield*, the volume of mail to the Middle East multiplied more than 500 times as sailors, soldiers, airmen and Marines arrived in the region. Tons of mail addressed to "Any Sailor or Marine" were eagerly received aboard ships and at desert outposts.

"They line up for hours, each trying to get a piece of mail," said Chief Postal Clerk Victor Forker aboard USS *Nassau* (LHA 4).

"We thank God for the American military. They are saving our people from a madman."

"They're glad people know they're out here and care about them."

USS *Saratoga* (CV 60) battle group postal clerks reported receiving 15,000 pounds of mail on one January day, shattering the previous record set during a holiday mail call.

Saratoga Springs, N.Y., namesake city of *Saratoga*, shipped VCRs, boxing gear, computer games and the local newspaper to the crew and embarked Carrier Air Wing 17 in a tradition of support that dates back to 1927. Before Christmas, a five-foot by seven-foot Christmas card was delivered to area malls where hundreds of residents penned holiday wishes to "Super Sara" sailors.

The card and stuffed Christmas stockings were then sent to the ship. More than 300 gifts were airlifted to the childrens' Christmas party at the ship's homeport at Mayport, Fla.

LT Ron Bethman, a South Carolina resident serving aboard USS *John F. Kennedy* (CV 67), received a scroll nearly 200 feet long from his nephew's Aiken, S.C., kindergarten class that included his nephew. Bethman displayed the masterpiece, which included hundreds of colorful hand prints from the children and teachers, on the mess decks.

The crew added their names and hometowns, and Bethman forwarded the scroll, dubbed the "living wall," inland to an Army unit in Saudi Arabia where soldiers personalized it and sent it on to another Aiken soldier in the desert before returning it to the children.

The Associated Press reported that residents in at least 47 cit-

ies in seven states along the Ohio River, took part in candlelight vigils Dec. 11 in tribute to *Desert Shield* forces. Meanwhile, troops enjoyed free mailing privileges, periodic free phone calls courtesy of AT&T and even tax breaks from "Uncle Sam."

At home, support for Navy and Marine families was modified and expanded during *Desert Shield/Storm*. Although families were accustomed to deployment, this one was different. In addition to toy drives, Halloween parties, donated Christmas trees and corporate grants to USO and other organizations, groups prepared to meet the needs of those left behind. Naval Station San Diego's Family Service Center was one of them.

"What the families are really worried about is that their service member won't come back," said Nancy Tarbell, deputy director of the center. Several support groups were formed, including one for ombudsmen. The center and area schools provided information to enable teachers and administrators to help kids work through this period.

At a Norfolk middle school, a counselor held half-hour sessions every morning for youngsters who had relatives deployed to the Middle East. One boy expressed his guilt and fear. "Before my



dad left, I gave him a real hard time — treated him wrong," he said. "Now that I know he might not come back, I'm scared and sorry. I love him."

Even before school started in August, teachers and counselors in Norfolk and Virginia Beach school districts, which have the highest percentage of Navy children in the country, began planning for *Desert Shield*, leaning heavily on the three Navy family service center staffs in the area for advice and expertise.

Most schools adopted a three-fold approach to the challenges of helping their students cope: counseling, education and community involvement. Teachers started discussion groups and lessons about the history and culture of the Middle East. Schools became involved in patriotic activities from writing letters and sending packages to deployed troops, to holding parades and tying yellow ribbons around the trees outside the schools.

To ease separation anxiety further, DoD distributed 60,000 copies of a book aimed at the 3- to 8-year-old military child, written by child psychologist Dr. Dennis Embry, to family service centers worldwide.

In February the Capitol building was once again the backdrop for a rally that saw thousands march, but this march included 12 special participants during the trip from Capitol Hill to the White House. Kuwaiti women from the Free Kuwait campaign chimed in when asked what they thought of America's role in the Middle East. "We thank God for the American military," they said. "They are saving our people from a madman."

All efforts by Hussein to destroy America's loyalty to her warriors ended only in multiple boosts on the homefront. America was outraged when Hussein paraded wives and children of Iraqi "guests," held as human shields to thwart allied attacks

against strategic sites. Again, Hussein's tactics backfired when coalition prisoners were shown delivering propaganda messages on Iraqi television. America was brought to the boiling point, and she replied with the highest support levels since World War II.

"We want to send a message [to the troops] that they're on the top of our mind," said radio personality Rick Donahue, "that we are not forgetting — that our lives aren't going on without them being included and they are very much in our day-to-day life."

In the final phase of *Desert Storm*, it took only 100 hours to liberate Kuwait. Photographs of Iraqis kissing the hands of their Marine captors strengthened the attitude of support and illustrated the compassionate nature of America's volunteer force — a highly-motivated force of professionals propelled by public support back home.

Perspectives changed during the eight months of *Shield*, *Storm* and calm. The ghost of Vietnam had been laid to rest. America is alive as troops come home to hero's welcomes. When the shield was set aside and the desert sand calmed, as a people Americans experienced a strength and unity not felt for years.

America's heroes are many — the POWs, those who served in various capacities, from the strategists to the seaman on watch — yet, there was another hero of Operations *Desert Shield/Storm* — the American people. For their patience and understanding, for realizing the price of freedom and the value of democracy, they are also heroes. Now there is a bond between country, constitution and military that joins every household around the United States.

Once again, sailors and Marines — active duty and reserves, warriors and families — proved they can stand together to do the job they were trained for. And this time, the American public stood proudly with them. □

Hotlines

Bridging the information gap

You have a loved one on a ship, in a squadron or with ground forces in the Gulf region. For months, contact has been limited to the mail and, if you're lucky, an occasional telephone call. On Jan. 17 the shooting starts. You want information, and you want it fast. Who do you call?

Nearly 485,000 relatives and friends called three toll-free hotline numbers operated around-the-clock by the Navy and Marine Corps during the war. The first week, the Navy received 92,000 calls — 65,000 at the Bureau of Naval Personnel's (BuPers) Emergency Coordination Center (ECC) and 27,000 at the Chief of Information's Crisis Response Cell (CCRC). The Marine Corps' Response Line Center (RLC) logged more than 19,000 calls during the same period. The Navy lines operated from Jan. 16 through March 22. The Marine hotline, staffed entirely by reservists who had volunteered for recall to active duty for *Desert Storm*, ran from Jan. 17 through April 10.

The ECC, CCRC and RLC hotlines are part of the services' network of personal support and information resources to assist Navy and Marine Corps families in time of crisis. The network includes worldwide Family Support Centers, command public affairs offices, chaplains, Navy and Marine Corps relief offices, Red Cross branches and other organizations.

The Navy's ECC number, which has been activated in previous crises, was intended for immediate family members to use when a relative's unit had experienced casualties. CCRC was established specifically to answer other callers' questions about Navy involvement in *Desert Storm*.

"We wanted to offer the best possible support and information to Navy families," said VADM Mike Boorda, Chief of Naval Personnel. "Our regular staff members, reservists and many volunteers pulled together to make sure anyone who needed help got that help as soon as possible."

Both the ECC and CCRC also had Spanish-speaking personnel assigned to each watch, and the Marines had a translator to assist the Hispanic community.

"When the television flashed that 800-number on the screen, people who were [seeking information] about any service branch

would call," said LCDR Bruce Williams of BuPers' public affairs office. Inquiries not directly related to *Desert Storm* were referred to the appropriate resource, such as ombudsmen, base locators, military postal authorities, personnel support detachments and Family Service Centers.

In the early days of the war, all 28 ECC, six CCRC and 12 RLC lines rang nonstop. The lines lit up whenever casualties were announced.

Watchstanders patiently explained to anxious callers that next-of-kin are personally notified of a death or serious injury by the Navy or Marine Corps and assured them that no news was, indeed, good news.

"We told them that if they had not heard from a Marine representative [in person], then their Marine was OK," said Marine Corps Maj. Fred Alexander. "They would never have to call an 800-number to find out if a Marine [or sailor] was hurt."

Even if newscasters emphasize there are no Navy or Marine casualties, viewers with loved ones in the fleet or the field still want reassurance from a Navy or Marine official.

"Sometimes families just want to hear information from another human voice; the

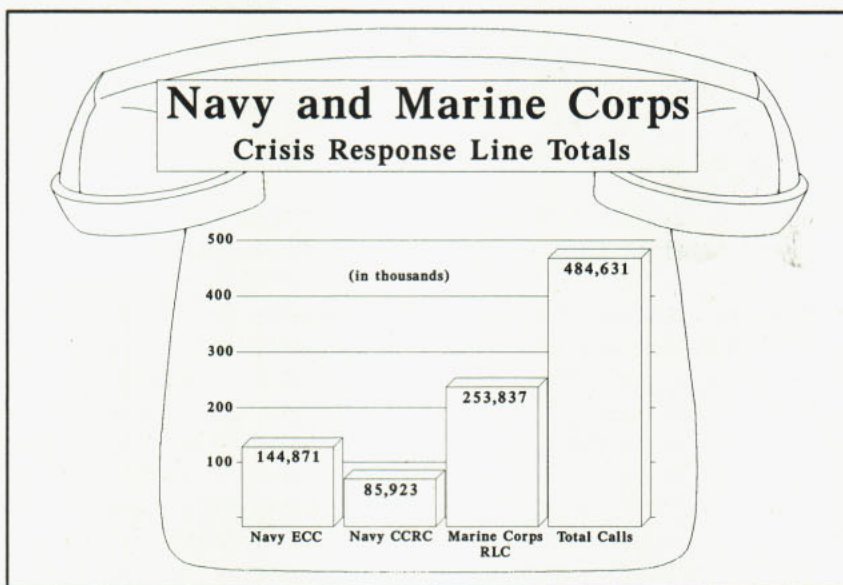
counselors did a lot of reassuring," said Williams.

Although many of the calls were from worried spouses or parents, others persevered through the busy signals. Congressional staff members, long-lost friends and curious children telephoned.

Not everyone requested information or service. Some called just to say "thanks" for being there. A group of mothers in Iowa sent cookies to the RLC. Well-wishers sent cards and letters to the phone talkers to express their appreciation.

"Nobody joined the Corps to answer phones; all of us want to be doing the things ... you see on the Marine Corps posters," noted Alexander, who added, "The best part of this job is that it's so clear we're meeting a real need."

Meeting the needs of democracy, whether in some remote corner of the world or at the end of a telephone line on the homefront, requires the bravest and best. The Navy-Marine Corps team was ready. □



Graphic by JO2 Paul A. Mace, USNR



Photo by PH1(AC) Scott M. Allen

Return to freedom



Photo by PH1(AC) Scott M. Allen



Photo by PH1(AC) Scott M. Allen

When the first American former POWs touched down on U.S. soil March 10, Americans raised their voices in a loud cry of jubilation. If the former POWs had any lingering doubts about the support of the American people, those doubts evaporated when flight "Freedom 01" landed.

Hundreds of flag-waving well-wishers lined the tarmac fence at Andrews Air Force Base, Md., cheering and chanting "U-S-A." Thousands more were there in spirit as they viewed the homecoming on television around the nation.

Each of the 21 former prisoners was greeted by Secretary of Defense Dick Cheney and Chairman of the Joint Chiefs of Staff Army Gen. Colin Powell.

"Your country is opening its arms to greet you," Cheney said. "In this rare moment in the life of our nation, let me speak for all Americans who thank you and all your fellow soldiers, sailors, airmen and Marines for a job well done."

"The American public can be justly proud of how the POWs did in general," said Marine Lt. Col. Clifford Acree during a press conference. "We did it with integrity, and we did it with pride."

Navy LTs Jeffrey Zaun, Robert Wetzel and Lawrence Slade were greeted by Navy Secretary H. Lawrence Garrett III and Chief of Naval Operations ADM Frank B. Kelso II upon their return to Naval Air Station Oceana, Va., where the trio received the POW, Purple Heart and National Defense Service medals.

"These officers symbolize the hundreds of thousands of young

Top left: Andrews Air Force Base, Md., was filled with hundreds of family members and friends honoring homecoming POWs. Center: LT Jeffrey N. Zaun greets the crowd. Above: Former POW, Marine Lt. Col. Clifford Acree receives a warm welcome from his wife.

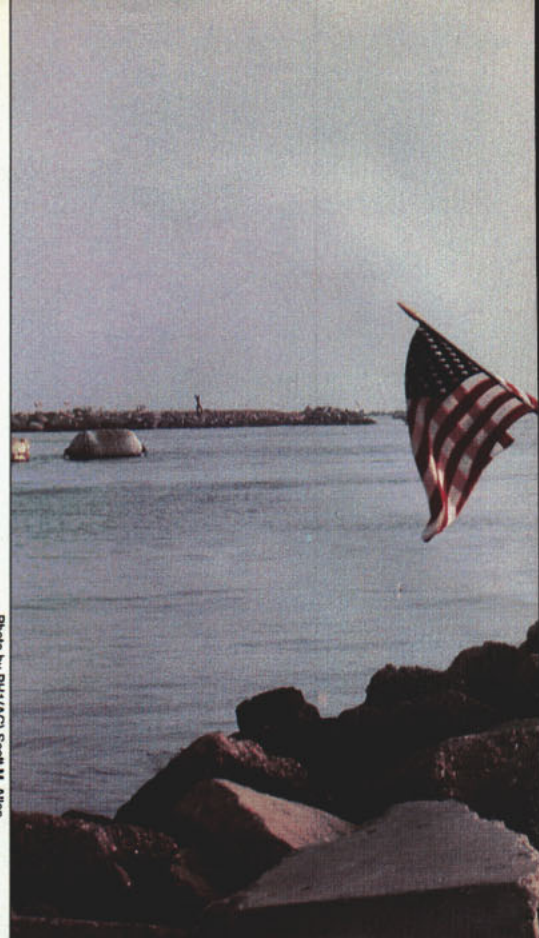
American men and women who served with pride and distinction in Southwest Asia," Kelso said. "Facing a ruthless enemy, they were courageous, determined and honorable. Despite brutality, privation and fear, they persevered. ... They are America's heroes."

Secretary Garrett added that Zaun, Wetzel and Slade represented the sacrifices of all who served in *Desert Shield/Storm*. "These men know better than anyone the value of freedom," he said, "for in defending ours, they sacrificed their own." □

Home at last



Photo by PH1(A/C) Scott M. Allen



Left: Kristin Blankinship salutes returning POWs at Andrews Air Force Base, Md. Top: Two supporters welcome USS *Sampson* home near her home port of Mayport, Fla. Center: CAPT Henry C. Giffin III, commanding officer of USS *Thomas S. Gates* (CG 51), celebrates

Thousands of flag-bearing, cheering families and friends crowded onto piers, tarmacs and parade fields across the nation in a frenzy of champagne-and-roses welcomes for wave after wave of America's returning war heroes.

At home ports around the nation, jubilant relatives jockeyed for position among throngs of well-wishers to get the first glimpse of loved ones deployed for many months.

Crowds toting signs, ribbons, banners and drums joined high school marching bands, expectant mothers and joyful fathers in greeting the awestruck warriors.

For sailors and Marines of the United States' seapower team, this homecoming

would never be forgotten.

"When we started pulling in, one guy on the jetty was waving a big American flag," said Damage Controlman 2nd Class Stephen Sholtzman, assigned to USS *Saratoga* (CV 60). "He was yelling, 'Welcome home.' That's the first thing I heard from America. I got the shivers. I couldn't believe we were really back after all this time. I saw the big signs first, then the mob on the pier. At first you could hear one band playing, then another, then people yelling and screaming. I never imagined this would happen."

"I'll never forget this day," said Marine Cpl. Mark Matler at Hickam Air Force Base, Hawaii. "It was amazing." □



Photo by PH2 Todd Bent



Photo by PH1 Richard J. Omer



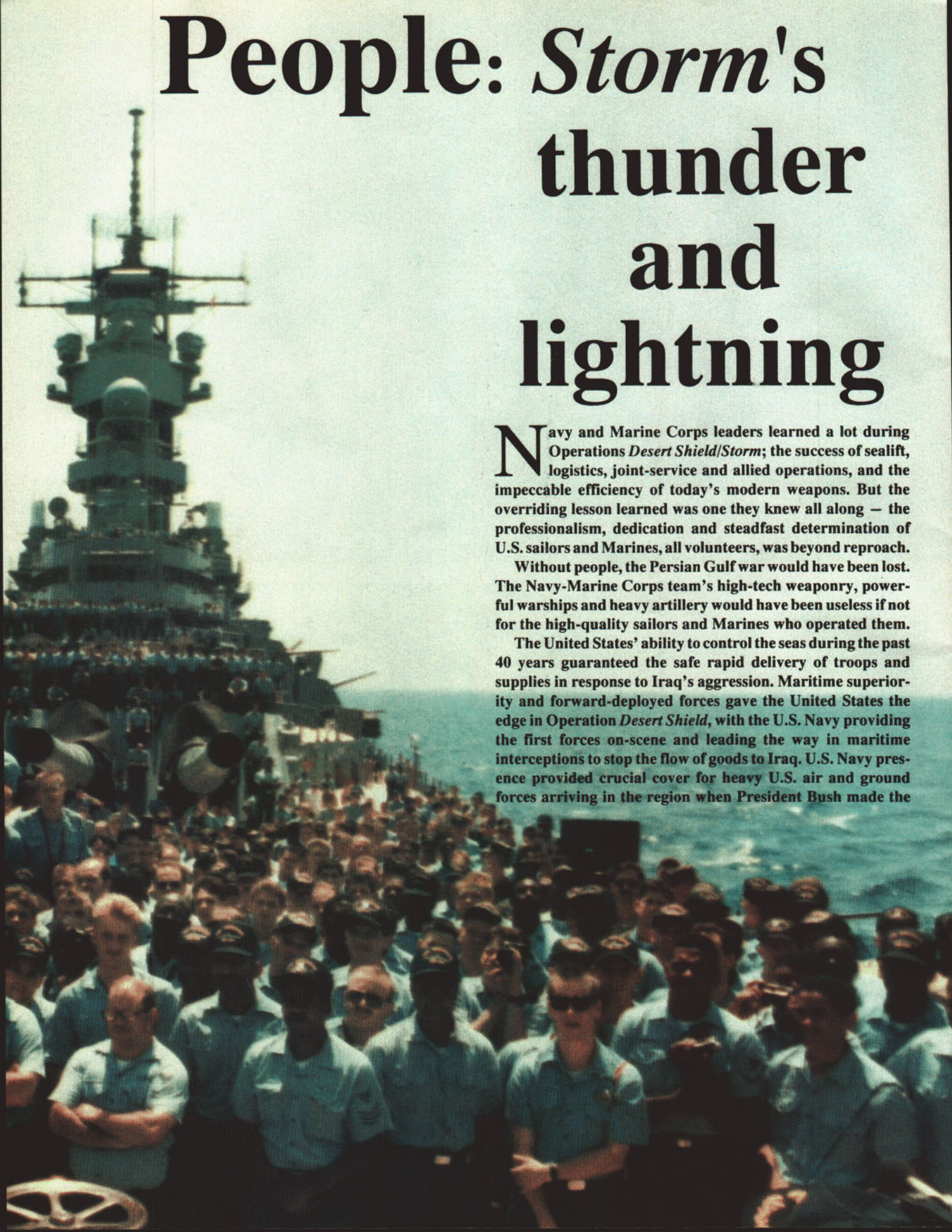
Photo by JO1(SW) Gregg Snaza



Photo by JO1(SW) Gregg Snaza

his ship's homecoming with fellow officers. Above Right: A sailor gets a long-awaited hug from his wife and daughter after returning to San Diego from the Persian Gulf. Right: Family and friends of USS *Biddle* (CG 34) crewmen line Norfolk's pier 25.

People: *Storm's* thunder and lightning



Navy and Marine Corps leaders learned a lot during Operations *Desert Shield/Storm*; the success of sealift, logistics, joint-service and allied operations, and the impeccable efficiency of today's modern weapons. But the overriding lesson learned was one they knew all along — the professionalism, dedication and steadfast determination of U.S. sailors and Marines, all volunteers, was beyond reproach.

Without people, the Persian Gulf war would have been lost. The Navy-Marine Corps team's high-tech weaponry, powerful warships and heavy artillery would have been useless if not for the high-quality sailors and Marines who operated them.

The United States' ability to control the seas during the past 40 years guaranteed the safe rapid delivery of troops and supplies in response to Iraq's aggression. Maritime superiority and forward-deployed forces gave the United States the edge in Operation *Desert Shield*, with the U.S. Navy providing the first forces on-scene and leading the way in maritime interceptions to stop the flow of goods to Iraq. U.S. Navy presence provided crucial cover for heavy U.S. air and ground forces arriving in the region when President Bush made the

decision to intervene. The U.S. Navy, forward-deployed as always, demonstrated America's resolve in those first crucial days. Internationally isolated and unable to benefit from its conquest of Kuwait, Iraq was hit hard by the international embargo, and even harder when the *Shield* turned to a *Storm*.

As the war drew to a close, Navy and Marine Corps leaders held nothing back in their praise for those who served with them.

"With skill, with courage and an awe-inspiring degree of dedication, you have helped crush a maniacal aggressor and helped make a safer, more peaceful world," said Secretary of the Navy H. Lawrence Garrett III.

"Our Navy has responded with superb professionalism and competence in *Desert Shield* and *Desert Storm*. ... You have added another magnificent chapter in the history of our Navy and nation," said Chief of Naval Operations ADM Frank B. Kelso II.

"In an extraordinarily complex theater of operations, you have not only proven America's resolve to categorically reject unprovoked aggression, but have affirmed that our nation's investment in the Navy-Marine Corps team stands on unbeatable grounds," said Marine Corps Commandant Gen. Alfred M. Gray. "Indeed you have marched to the sound of thunder with distinction, courage and dedication, and willingness to sacrifice what America has come to expect from her premier force in readiness."

Desert Storm commander, Army Gen. H. Norman Schwarzkopf, echoed these leaders in his address to all U.S. forces March 6.

"I asked you to be the thunder and lightning of *Desert Storm*. You were all that and more. Through your courageous acts, your dedicated service, your determination and love of your country, you have written history in the desert sands that can never be blown away by the winds of time. ... Your country is proud of you, the world is proud of you, and I am proud of you," Schwarzkopf said.

As historians investigate the full ramifications of Operations *Desert Shield/Storm*, one fact is clear — the events from August

2, 1990, to the present illustrated the United States' position as a world leader and global superpower. The Persian Gulf War demonstrated that Third World countries armed with First World equipment cannot compete with a military force composed of men and women from a nation where machines, electronics and computers are found in their homes.

While *Desert Shield/Storm* will no doubt lead to deeper involvement of U.S. forces in the Gulf, shouldering that commitment will fall principally on the Navy-Marine Corps team. That team will continue its vital role in the stable future of the Middle East, just as it has for the past 41 years. □

Below: USS *Nassau* steams off USS *Raleigh*'s starboard quarter in the North Arabian Sea. Opposite page: *Wisconsin* crew members in the Persian Gulf (photo by PH1(AC) Scott M. Allen).



Photo by Capt. Rick Muller, USMC

Desert Shield/Storm lessons learned

The Navy's recently published preliminary report on *Desert Shield/Storm* outlines some of the broad "lessons learned". Here are a few of the highlights:

People: The all volunteer force worked and worked well. Our men and women knew their jobs, knew their equipment and knew how to fight. Our superb people were the key to victory.

Training: High quality, realistic training is expensive, time-consuming, difficult and fundamental to success in combat.

Joint operations: Working as a team with other services and our coalition partners generated the greatest possible combat capability in the shortest time.

Forward presence: More than 40 years of naval presence in the harsh environment of Southwest Asia demonstrated commitment, maintained readiness, and paved the way for Operation *Desert Shield*. Naval forces benefited from that experience and provided crucial cover for air and ground forces arriving in the region.

Sea control: Sea control is fundamental to joint power projection. It means we can deliver our troops and supplies safely

to any region. Sea control also made possible one of the most successful naval interception campaigns in history.

Communications: Almost every aspect of naval communications capability was stressed to the limit. Problems were solved through aggressive management, work-arounds, innovation, close cooperation, equipment upgrades and new installations.

Logistics: The exceptional levels of ship and aircraft readiness maintained throughout the operation reflect the sea-based, self-sustained logistic capability of naval forces.

Sealift: Sealift investments of the '80s paid huge dividends: more than 90 percent of all cargo was moved into theater by sea, and more than 95 percent will come home that way.

Precision weapons: Precision weapons like *Tomahawks* and laser-guided bombs are clearly the weapons of choice against the most important, heavily defended, war-winning targets.

Multi-mission systems: Platforms and systems capable of multi-mission operations proved their value, making major contributions in cross-warfare areas where demand was greatest.

Desert Shield/Storm chronology

1990

Aug. 2: Iraq invades Kuwait. Eight U.S. Navy Middle East Force ships are present in the Persian Gulf (continuous Middle East presence since 1949).

Aug. 6: Defense Secretary (SecDef) Dick Cheney travels to Saudi Arabia to discuss request for assistance and deployment of U.S. forces in country. SecDef travels also to Egypt and receives permission to send U.S. warships through the Suez Canal.

Aug. 7: USS *Independence* (CV 62) carrier battle group arrives on station in the Gulf of Oman.

—USS *Dwight D. Eisenhower* (CVN 69) carrier battle group transits the Suez Canal en route to the Red Sea.

Aug. 8: President Bush orders U.S. Armed Forces to Saudi Arabia.

Aug. 14: Advanced elements of the 1st Marine Expeditionary Force (MEF) and the 7th Marine Expeditionary Brigade (MEB) arrive in Saudi Arabia. Hospital ship USNS *Comfort* (T-AH 20) deploys for the Middle East.

Aug. 15: Ships from Maritime Prepositioning Squadron 2 (Diego Garcia) begin unloading in Saudi Arabia. Hospital ship USNS *Mercy* (T-AH 19) deploys for the Middle East.

Aug. 16: Multinational maritime intercept operation begins challenging ships going to or from Iraq and Kuwait, consistent with U.N. Security Council Resolution 661.

—USS *John L. Hall* (FFG 32) executes the first maritime intercept by a U.S. warship.

Aug. 18: In separate incidents, USS *Reid* (FFG 30) and USS *Robert G. Bradley* (FFG 49) fire warning shots across the bows of two Iraqi oil tankers leaving the Persian Gulf.

—USS *England* (CG 22) boards a Chinese freighter, the first boarding of the intercept operation. USS *Scott* (DDG 995) executes the first diversion, without boarding.

Aug. 24: USS *Wisconsin* (BB 64) transits the Strait of Hormuz into the Persian Gulf.

Aug. 26: U.N. Security Council votes, without dissension, to allow use of military force to uphold the trade embargo against Iraq.

Aug. 27: The first two fast sealift ships, USNS *Altair* (T-AKR 291) and USNS *Capella* (T-AKR 293) arrive in Saudi Arabia carrying components of the Army's 24th Infantry (Mechanized) Division.

—Deployment of Fleet Hospital 5 to Saudi Arabia announced.

Sept. 4: USS *Goldsborough* (DDG 20) boarding team performs the first boarding and seizure of an Iraqi freighter in the North Arabian Sea.

—Coast Guard law enforcement detachment and *Goldsborough* crewmen detain vessel *Zanoobia's* master and crew and pilot ship to Muscat, Oman.



U.S. Navy Photo

First combat employment of the Navy's new generation of ships (Aegis cruisers, mine counter-measures ships and air cushioned landing craft).

Sept. 5: The Navy lifts the firing suspension for Wisconsin's 16-inch guns.

Sept. 7: Amphibious Ready Group (ARG) Alpha units USS *Okinawa* (LPH 3), USS *Ogden* (LPD 5), USS *Fort McHenry* (LSD 43), USS *Cayuga* (LST 1186) and USS *Durham* (LKA 114) with the 13th Marine Expeditionary Unit (MEU) embarked, arrive in the Gulf of Oman.

Sept. 8: *Comfort* arrives in the Persian Gulf.

Sept. 11: The amphibious ships USS *Shreveport* (LPD 12), USS *Trenton* (LPD 14), USS *Gunston Hall* (LSD 44), USS *Portland* (LSD 37) and USS *Spartanburg County* (LST 1192), with Marines of the 4th MEB

embarked, arrive in the Gulf of Oman in support of *Desert Shield/Storm*.

Sept. 13: ARG Bravo units USS *Dubuque* (LPD 8), USS *Schenectady* (LST 1185) and USS *San Bernardino* (LST 1189) with the 1st Battalion, 2nd Marines embarked, arrive in Saudi Arabia.

Sept. 14: USS *John F. Kennedy* (CV 67) carrier battle group transits the Suez Canal into the Red Sea.

—Amphibious ships USS *Nassau* (LHA 4), USS *Pensacola* (LSD 38) and USS *Saginaw* (LST 1188), with additional components of the 4th MEB embarked, arrive in the Gulf of Oman.

Sept. 20: SecDef announces that, effective Sept. 17, personnel on duty in the Middle East are authorized Imminent Danger Pay.

Sept. 23: *Mercy* and *Comfort* steam together for the first time in the Persian Gulf, making Navy medical history.

Oct. 1: *Independence* transits the Strait of Hormuz en route to the Persian Gulf (first time a carrier has been deep inside the Gulf since USS *Constellation* (CV 64) in 1974).

—*Super Servant III* arrives in Bahrain with her cargo of U.S. Navy minesweepers; USS *Adroit* (MSO 509), USS *Impervious* (MSO 449), USS *Leader* (MSO 490) and new mine countermeasures ship USS *Avenger* (MCM 1).

Oct. 15: USS *Elmer Montgomery* (FF 1082) completes the 2,500th intercept by the multinational maritime intercept force since the operation began Aug. 12.

Oct. 30: A major steam leak in the engine room of USS *Iwo Jima* (LPH 2) kills 10 crew members.

Nov. 1: USS *Midway* (CV 41) carrier battle group relieves the *Independence* carrier battle group in the North Arabian Sea.

Nov. 8: President Bush announces that in addition to the 230,000 troops in the Persian Gulf region, more heavy divisions, Marines and ships will be headed for the Persian Gulf.

Nov. 13: USS *Missouri* (BB 63) deploys for the Persian Gulf region from Long Beach, Calif.

Nov. 27: Maritime intercept update: 4,162 challenges; 500 boardings; 19 diversions.

Nov. 29: U.N. Security Council approves resolution authorizing use of military force unless Iraq vacates Kuwait by Jan. 15, 1991.

Dec. 20: U.S. troop strength update: 280,000 in the Middle East region. Reserves recalled - 127,293 (7,314 Navy, 17,375 Marines).

—Maritime intercept update: 5,509 challenges; 679 boardings; 27 diversions.

Dec. 21: An Israeli chartered liberty ferry shuttling crew members of USS *Saratoga* (CV 60) capsizes and sinks off Haifa, Israel, killing 21 sailors.

Dec. 23: A truck on a liberty excursion in Abu Dhabi, United Arab Emirates, carrying crew members of *Midway* overturns, killing two sailors and injuring five others.

Dec. 28: DoD announces first-ever chemical/biological vaccination program for U.S. forces.



Photo by PH1(Ac) Scott M. Allen

First tandem deployment of hospital ships; USNS *Mercy* (T-AH 19), USNS *Comfort* (T-AH 20).

1991

Jan. 1: *Missouri* arrives in the Gulf of Oman.

Jan. 2: U.S. troop strength update: More than 325,000 in region; 35,000 Navy, 55,000 Marines.

—Maritime intercept update: 6,221 challenges; 749 boardings; 32 diversions.

—U.S. Navy ship strength update: 55 total; 25 - Persian Gulf, 20 - North Arabian Sea/

Gulf of Oman, 10 - Red Sea.

Jan. 6: *Saratoga* transits the Suez Canal en route to the Red Sea for the fifth time, a record canal transit by any Navy ship during a single deployment.

Jan. 8: U.S. troop strength update: more than 360,000 in region.

—To date, 147,300 reserves recalled (9,939 Navy, 18,155 Marines).

—U.S. Navy ship strength update: 63 total; 18 - Persian Gulf, 21 - North Arabian Sea/Gulf of Oman, 12 - Red Sea, 12 - Eastern Mediterranean.

Jan. 10: Eight-ship amphibious task force enters the Persian Gulf to conduct routine operations. Led by *Nassau*, it carries a complement of nearly 10,000 sailors and Marines.

Jan. 12: Congress approves joint resolutions authorizing the use of force against Iraq.

—USS *Ranger* (CV 61) carrier battle group arrives on station in the North Arabian Sea. Amphibious Group 3, comprised of 13 ships (with 7,500 Marines of the 5th MEB embarked), also arrives on station in the North Arabian Sea and joins the amphibious groups already on station, creating the largest amphibious task force since the Korean War.

—*Midway* re-enters the Persian Gulf.

Jan. 14: USS *Theodore Roosevelt* (CVN 71) carrier battle group transits the Suez Canal, and arrives on station in the Red Sea.

Jan. 15: USS *America* (CV 66) carrier battle group transits the Suez Canal and arrives on station in the Red Sea. *Ranger* carrier battle group arrives on station in Persian Gulf.

Jan. 16: U.S. troop strength update: 425,000 in region; 60,000 Navy, 75,000 Marines.

—U.S. Navy ship strength update: 108 total; 34 - Persian Gulf, 35 - North Arabian Sea/Gulf of Oman, 26 - Red Sea, 13 - Eastern Mediterranean.

—Maritime intercept update: 6,960 challenges; 832 boardings; 36 diversions.

—To date, 19 countries have deployed ground forces and 14 nations are participating in naval efforts.

—Seventeen anti-ship mines discovered in Persian Gulf since Dec. 21, 1990.

—At 7 p.m. (EST), the White House announces that "the liberation of Kuwait has begun." The offensive action against Iraq, Operation *Desert Storm*, begins under provisions of 12 U.N. Security Council resolutions and resolutions of both houses of the U.S. Congress.

—Following President Bush's address to the nation, SecDef and Army Gen. Colin Powell, chairman of the Joint Chiefs of Staff, announce at a Pentagon briefing that hundreds of U.S. and coalition air strikes on missile and anti-aircraft targets in Iraq and Kuwait are to "destroy Saddam Hussein's offensive military capabilities." SecDef reports that "initial attacks appear to have gone very, very well."

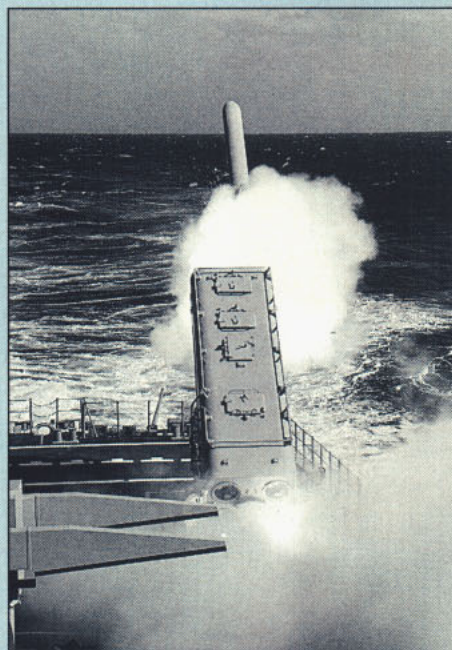


Photo by MMCS(SW) Russell E. Henderille

First ship-launched *Tomahawk* cruise missile in combat.

Jan. 17: USS *San Jacinto* (CG 56) fires the first *Tomahawk* cruise missile from the Red Sea between 1 and 2 a.m. (Gulf time). Moments later, USS *Bunker Hill* (CG 52) fires the first *Tomahawk* cruise missile from the Persian Gulf.

—The Navy launches 228 combat sorties on the first day of *Desert Storm* from six aircraft carriers in the Red Sea and Persian Gulf.

—The United States reports an F/A-18 and an A-6 lost over Iraq. Navy LT Michael S. Speicher, listed as missing — the first combat casualty of *Desert Storm*.

—Three Marines and one Navy corpsman,

HN Clarence Dean Conner, are injured in Saudi Arabia by Iraqi artillery fire near the Kuwaiti border — the first ground combat casualties of *Desert Storm*.

Jan. 18: USS *Nicholas* (FFG 47), in operations with Army helos and a Kuwaiti patrol boat, neutralizes Iraqi forces firing on coalition aircraft with anti-aircraft artillery and shoulder-fired SAMs from 11 Kuwaiti oil platforms in the northern Persian Gulf. Five Iraqis are killed, three are wounded and 23 Enemy Prisoners of War (EPWs) are taken aboard *Nicholas* for transfer to a holding facility.

—The United States loses two additional aircraft, a Navy A-6 and an Air Force F-15. The two crewmen of the F-15 are listed as missing. The two crewmen of the A-6, lost on Jan. 17, are also listed as missing. To date, the United States has lost four aircraft and lists five personnel missing in action (MIA).

—The first Iraqi *Scud* missile lands in Israel, injuring 10 to 12 civilians.

—In air-to-air engagements, eight Iraqi MiG-29s and *Mirage* F-1s are destroyed; two are downed by Navy F/A-18s of *Saratoga's* Fighter Squadron 81 (directed by E-2Cs from Carrier Air Wing 17).

Jan. 19: Navy A-6s and A-7s successfully launch a standoff land attack missile (SLAM) against an Iraqi target for the first time in combat.

—USS *Louisville* (SSN 724) fires the first submarine-launched *Tomahawk* cruise missile in combat history while submerged in the Red Sea. The missile is directed against an unidentified Iraqi target.

—A Marine OV-10 reconnaissance aircraft is downed by Iraqi SAMs. Two crewmen are listed missing. To date, 10 Iraqi aircraft (six MiG-29s, three *Mirage* F-1s, one MiG-23) have been destroyed in air-to-air engagements with coalition aircraft. The United States has lost six aircraft and lists seven personnel missing.

—President Bush signs authorization to extend call-up of up to 1 million National Guard/Reserves for up to two years. DoD raises the ceilings for National Guard/Reserves to 360,000. The Navy's authorization ceiling is raised from 30,000 to 44,000, Marines from 23,000 to 44,000.

Jan. 20: Coalition sorties flown pass 7,000. Four additional personnel are listed

as missing. The United States has lost eight aircraft and lists 11 personnel missing.

—An Iraqi artillery battery is destroyed by Navy A-6 and Air Force A-10 aircraft. Marines and Army troops continue in defensive mode in forward positions, but there have been no direct ground confrontations.



U.S. Navy Photo

First employment of maritime and afloat pre-positioning ships for seaborne mobile logistics.

Jan. 21: More than 8,000 sorties have been flown by coalition aircraft. Air operations focus on neutralizing fixed/mobile *Scud* launch sites and Iraqi troop concentrations. To date, coalition aircraft losses total eight, including two non-combat-related losses.

—A Navy F-14 is lost over Iraq. Two additional Navy personnel are listed as missing. The United States has lost 10 aircraft and lists 13 personnel missing.

—The United States warns Iraq that it will be held accountable for mistreatment of U.S. Prisoners of War (POWs) after Iraq announces captured Americans will be placed at strategic target sites as "human shields."

—*Roosevelt* carrier battle group arrives on station in the Persian Gulf region.

Jan. 22: More than 10,000 sorties have been flown, with no U.S. aircraft lost in air-to-air engagements to date. Oil storage tank fires are started by Iraqis in Wafra, Ash Shuaiba and Mina Abdullah, Kuwait, but have little effect on air operations.

—Air Force special operations forces recover one crew member of a Navy F-14 downed on Jan. 21.

—Four Navy A-6s attack and disable an Iraqi T-43-class ship — capable of laying

20 mines — in the Northern Persian Gulf.

—U.S. ships attack three Iraqi patrol boats, disable one and chase off two others. Three additional mines are found and destroyed.

—U.S. troop strength update: 474,000 (Iraqis - 545,000). Reserves recalled - 165,797 (13,303 Navy, 22,048 Marines).

Jan. 23: An Air Force F-16 is downed by artillery fire over Kuwait. The pilot ejects over the Persian Gulf and is rescued by Helicopter Anti-Sub Squadron (Light) 44, embarked aboard *Nicholas*, marking the first over-water combat SAR.

—Navy A-6s disable an Iraqi tanker that had collected and reported intelligence data. The A-6s set off three explosions, killing three Iraqi personnel. A-6s also attack and sink a *Winchester*-class hovercraft being refueled by the tanker, and a *Zhuk* patrol boat.

Jan. 24: 15,000 sorties (8,000 combat, 7,000 support) have been flown, and more than 220 *Tomahawk* cruise missiles have been launched at Iraqi targets. Air strikes are directed at *Scud* missile launchers, lines of transportation and communication, control sites and airfields. At Al Quara West airfield, three Soviet-built TU-16 *Badger* heavy bombers are caught on the ground, ready to take off, and destroyed.

—Navy A-6s attack and destroy an Iraqi minelayer and sink an Iraqi *Zhuk* patrol boat. Another Iraqi minesweeper hits an Iraqi mine while attempting to evade A-6 fire.

—Twenty-two survivors are taken from the sea by a helo from USS *Curtis* (FFG 38), near the island of Qurah. During the rescue, the helo comes under attack, returns fire and kills three. Twenty-nine additional Iraqis surrender. Fifty-one EPWs are taken into custody by helo crews from USS *Leftwich* (DD-984), and the island is reclaimed as the first liberated Kuwaiti territory.

—A-6s and F/A-18s attack the Umm Qasr Naval Base, hitting four Iraqi ships.

—U.S. ships continue multiple operations, including locating and destroying 25 mines to date in the Northern Persian Gulf.

Jan. 25: A record 2,700 sorties flown today brings total coalition sorties to 17,500

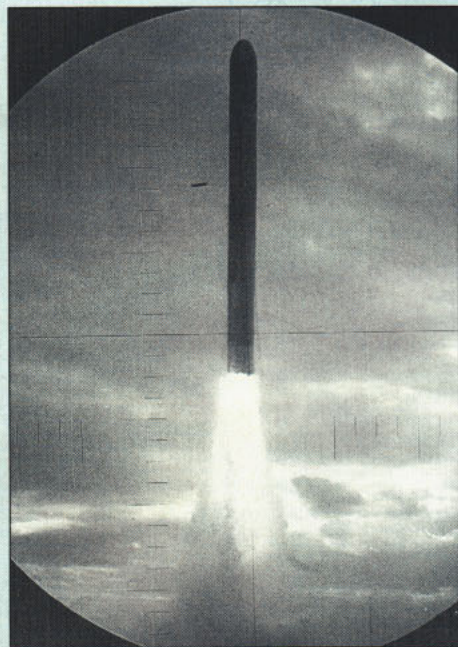
to date, with 236 *Tomahawk* cruise missile launches. Iraq has lost 43 aircraft — 19 in air-to-air engagements, 24 on the ground. The United States has lost 10 aircraft to ground fire and the coalition has lost seven. The total of 17 aircraft losses represented two-tenths of 1 percent of all combat missions flown to date.

—U.S. ships engage and attack an Iraqi vessel laying mines near the Sea Island terminal, setting part of the terminal and surrounding water on fire.

—Iraq dumps several million barrels of oil into the Persian Gulf from the Sea Island crude oil tanker loading terminal off the coast of Kuwait. Five pre-positioned Iraqi tankers in the occupied Kuwaiti port of Mina al Ahmadi are drained of oil, adding to the spill's volume.

—Described by DoD as "an act of environmental terrorism", the spill is approximately 20 miles long, 3 miles wide and 3 feet deep and threatens to foul the intakes of Saudi Arabia's desalinization plants.

—U.S. troop strength update: 482,000 in region. Reserves recalled - 192,965 (14,702 Navy, 22,142 Marines).



U.S. Navy Photo

First submarine-launched *Tomahawk* cruise missile in combat.

Jan. 26: Coalition aircraft pass 20,000 sorties flown as the air campaign's focus shifts from strategic targets to battlefield preparation, with targeting on military storage facilities, military production

facilities, Republican Guard troop fortifications and *Scud* launchers. Bomb damage assessments confirm significant destruction of Iraqi biological/chemical production capabilities.

—At least 12 Iraqi MiG-29s, F-1s and 12 transport aircraft have landed in an undisclosed location in Iran, a declared neutral country. DoD was unsure whether Iraqi planes were seeking a safe haven from bombing attacks, whether this was a mass defection or a husbanding of resources for future combat operations.

—An estimated 120 million gallons of oil have spilled into the Persian Gulf from the Sea Island terminal. The oil slick — partly ablaze from the Jan. 25 engagement between U.S. ships and an Iraqi patrol boat — grows to 31 miles long and eight miles wide. The United States sends a team of Coast Guard, National Oceanographic and Atmosphere Administration and Environmental Protection Agency oil pollution and environmental experts to assist Saudi Arabian efforts to contain the spill.

—U.S. Marines stage the largest artillery attack of the war to date, firing a battery of 155mm howitzers at Iraqi troops six miles inside Kuwait.

—EPWs to date: 110 in U.S. facilities awaiting processing to a Saudi Arabian EPW camp.

Jan. 27: Air Force F-111s attack pipelines feeding the Sea Island terminal with GBU-15 laser-guided bombs to stem the flow of oil, now 35 miles long and 10 miles wide, and to ignite oil and burn off pollutants. The attack specifically targets a system of pipes that regulate oil flow from storage tanks to the terminal, called manifolds.

—A-6s attack and destroy an Iraqi ship, and coalition naval forces continue to hunt Iraqi patrol and mine-laying boats in the Northern Persian Gulf and near Bubiyan Island. To date, eight Iraqi vessels (one oil platform service ship, two patrol boats, one tanker and four unknown) are presumed destroyed. Ten (four mining vessels, one hovercraft, three patrol boats, and two unknown) have been confirmed sunk.

—Thirty-nine Iraqi aircraft, including 23 in the past 24 hours, have landed in Iran. Iran announces that, to protect its neutral-

ity, any warplanes landing within its borders will be confiscated and held until the end of hostilities.

—U.S. *Patriot* missiles intercept six Iraqi *Scud* missiles aimed at Saudi Arabia and Israel. Fifty-one *Scuds* have been launched to date.

Jan. 28: The status of seven U.S. air crewmen is changed from MIA to POW.

—A total of 80 Iraqi aircraft have relocated to Iran. Aircraft ferrying is characterized as "possible defections" as a consequence of the air campaign that achieved air superiority and neutralized Iraqi counterattack.

—Marine and coalition aircraft attack an Iraqi convoy inside Kuwait, destroying 24 tanks, armored personnel carriers (APCs) and trucks. U.S. ground forces continue to receive sporadic artillery fire along the Kuwaiti border, and engage in counter-battery artillery missions. The Gulf oil slick appears to stop flowing from the Sea Island terminal. DoD estimates the slick contains 460 million gallons of oil.



Photo by PH2 Million Savage

First employment of Navy fleet hospitals.

Jan. 29: More than 700,000 coalition air, ground and naval personnel are present in the theater of operation, and more than 110 coalition combatant ships are participating. U.S. troops number more than 490,000.

—In the first major ground confrontations, Iraq mounts a four-pronged raid across the Kuwaiti border. Near Al Wafra, U.S. and coalition forces engage a mechanized battalion with *Cobra* gunships and fixed-wing aircraft. They repulse the attack, destroying 10 enemy tanks.

—North of Ras Al Khafji, another Iraqi battalion crosses the border with turned turrets — an apparent gesture of surrender — then attacks. U.S. AC-130s and Army *Cobra* helicopters destroy four tanks,

and 13 other enemy vehicles.

—Fighting continues for control of Khafji through the night. Forty more Iraqi tanks cross the border and engage U.S. Marine light armored infantry. The attack was repelled, but 11 Marines are killed in action (KIA) — the first ground combat deaths of the operation. Two Marines are wounded.

—A total of 33 enemy tanks and 28 APCs are destroyed.

—Marines of the 13th MEU capture Umm al Maradim Island, 12 miles off the coast of Kuwait. Marines plant the Kuwaiti flag and destroy anti-aircraft weapons and artillery stored on the tiny island. This is the second island reclaimed for the Kuwaiti government by the coalition.

—Navy helos search Maradim Island, investigating reports of Iraqis offering to surrender, and are fired upon by approximately 20 Iraqi small craft with rocket propelled grenades and automatic weapons. The helos return fire, sinking four boats and damaging 12 others. A-6s engage the fleeing boats.

Jan. 30: Two weeks into *Desert Storm*, the Navy has flown more than 3,500 sorties from six carriers and launched more than 260 *Tomahawk* cruise missiles.

—The fire at the Sea Island terminal is confirmed to be extinguished, and the oil flow from the terminal has stopped.

—Seventy-four EPWs are captured in two engagements.

—Saudi Arabian National Guardsmen and Qatari tanks engage a column of Iraqi infantry and tanks in Ras al Khafji. After a protracted battle, the Iraqis are forced from the town with the help of U.S. Marine gunships and artillery.

—Navy A-6s attack three Iraqi landing craft in the vicinity of Shat al-Arab Channel, leaving two enemy ships dead in the water. The other ship flees. A-6s also attack a patrol boat in the Northern Persian Gulf. The boat is set ablaze.

—In the vicinity of Bubiyan Island, Navy aircraft engage four enemy vessels, sinking three patrol boats and damaging a landing craft.

—*Curts* and *Leftwich* rescue 20 enemy soldiers from an Iraqi amphibious landing craft sunk by a Navy A-6 and British *Lynx* helos in the Northern Persian Gulf. *Leftwich*

is the primary combat search and rescue (CSAR) platform in the Gulf, locating and recovering downed pilots. *Leftwich* has participated in 16 CSAR cases to date.

Jan. 31: More than 32,000 sorties have been flown (2,600 today) with no air-to-air losses of U.S. aircraft. Coalition air, ground and naval personnel pass 705,000. U.S. troop strength passes the half-million mark.



Photo by PH1(A/C) Scott M. Allen

First combat use of Marine Corps AV-8B Harriers from Navy ships.

Feb. 2: Coalition naval operations continue with an attack on the Al Kalia naval facility. One Iraqi *Exocet*-capable patrol craft is hit directly with two laser-guided bombs, while a second U.S. aircraft launches a string of twelve 500-pound bombs across another patrol boat. The bombs also strike a building on the pier, generating several secondary explosions.

—Helos from *Nicholas* engage four Iraqi patrol boats near Maradim Island, destroying one and damaging two other vessels. A-6s score direct hits on an enemy patrol boat in Kuwait City harbor. To date, 35 Iraqi naval craft have been either sunk or damaged.

Feb. 3: The battleship *Missouri* fires eight 2,000-pound shells from her 16-inch guns, destroying prefabricated enemy concrete command and control bunkers Iraq is moving into Kuwait.

—The barrage, totaling 16,000 pounds of high explosives, marked the first combat firing of *Missouri*'s 16-inch guns since the Korean War.

—This also marks the first use of a Remotely Piloted Vehicle (RPV) for gunfire spotting in a hostile environment.

Feb. 4: More than 44,000 sorties have been flown — approximately one bombing sortie for every minute of *Desert Storm* operations — including 250 sorties and

six B-52 strikes on Republican Guard troop positions.

—U.S. aircraft hit targets of opportunity, including a Marine AV-8B *Harrier* attack that destroys or damages 25 Iraqi tanks using *Rockeye* anti-tank bombs, and a strike on a truck convoy. Three *Scud* missile sites are hit and several support vehicles are damaged.

Feb. 5: Marine *Harriers* bomb and strafe a 25-truck convoy, causing multiple secondary explosions. Coalition aircraft hit resupply convoys attempting to cross bombed-out bridges between Baghdad and Basra.

—EPWs total more than 800 to date.

Feb. 6: *Missouri* destroys four artillery emplacements and a command bunker with another 16-inch gun barrage in support of Marines. In a second salvo, *Missouri* fires 28 16-inch rounds against a radar control site, completely destroying it. *Missouri* fires a total of 112 16-inch shells and 12 5-inch rounds in eight fire support missions during a 48-hour period.

—Within two hours of relieving her sister battleship, *Wisconsin* conducts her first naval gunfire support mission since the Korean War, firing an 11-round salvo with her 16-inch guns, and destroys an Iraqi artillery battery in southern Kuwait. *Nicholas* escorts the battleship. A Marine OV-10 *Bronco* calls in the fire mission.

—Navy and Marine aircraft have flown more than 11,000 combat sorties during *Desert Storm*.

—Naval maritime intercept update: 7,100 challenges; 860 boardings; 40 diversions.

—To date, there are 35 U.S. fatalities: 12 KIAs, 23 noncombat deaths; 11 wounded in action (WIAs); 24 MIA s(six Navy, one Marine); eight POWs (two Navy, two Marines).

—U.S. troop strength update: 503,000 in region. Reserves - 211,146 (15,376 Navy, 22,634 Marines).

—Other coalition forces exceed 205,000. Thirty-two nations have forces in place supporting *Desert Storm* (Argentina, Australia, Bahrain, Bangladesh, Belgium, Canada, China, Czechoslovakia, Denmark, Egypt, France, Germany, Greece, Hungary, Italy, Kuwait, Morocco, the Netherlands, New Zealand, Niger, Norway, Oman,

Pakistan, Poland, Qatar, Saudi Arabia, Senegal, Spain, Syria, United Arab Emirates, United Kingdom and the United States).

Feb. 7: Using her RPV for spotting, *Wisconsin* pounds Iraqi artillery, electronic-warfare and naval sites with her 16-inch guns. Fifty rounds sink or severely damage 15 boats, and destroy piers at Khawr al-Mufattah Marina. Nineteen rounds are also fired at artillery.

—Two Navy F-14s down an Iraqi MI-8 helo, and A-6s attack and heavily damage two Iraqi patrol boats in the northern Gulf near the Al Faw peninsula.

—Cheney and Powell depart for Saudi Arabia to make a military assessment of *Desert Storm*.

Feb. 11: EPW count rises to 1,000-plus with the additional surrender of 75 Iraqi troops.

—A 300-member contingent of the Afghan Mujahedeen fighters becomes the 34th coalition partner supporting *Desert Storm*.

—America's carrier battle group transits the Strait of Hormuz en route to their Persian Gulf deployment.

—U.S. aircraft fire two laser-guided bombs on a Baghdad target identified as a camouflaged fortified command and control bunker, in the residential al-Amerieh district. Iraq claims the site was a bomb shelter inhabited by civilians and announces hundreds killed.

—Navy aircraft destroy an *Exocet* missile-capable *Frelon* helicopter while it is on the ground. Navy aircraft also assisted in the Persian Gulf oil clean-up by providing information on the extent and movement of the spill.

—The air campaign in Kuwait is complicated by smoke from more than 50 oil field fires, mainly in Al-Wafra area. DoD suspects Iraq of placing charges on oil wells to cloud the battlefield and mask troop movements.

—Marines again exchange sporadic border fire with enemy troops, while continuing patrols and counter-reconnaissance deployments.

—To date, there have been 40 U.S. fatalities: 12 KIAs, 28 noncombat; 10 WIAs; 26 MIAs (seven Navy, two Marines); eight POWs (two Navy, two Marines).

—U.S. troop strength update: more than 510,000; more than 80,000 Navy, more than 90,000 Marines.

—United States has lost 28 aircraft (18 fixed-wing in combat, three fixed-wing in non-combat mishaps, seven helicopters lost in noncombat). Coalition has lost 10 aircraft. Forty Iraqi aircraft and four helos have been shot down in air-to-air engagements with no U.S. air-to-air losses. One hundred thirty-six Iraqi aircraft have flown to Iran thus far. Navy and Marine aircraft have flown more than 15,000 combat sorties since the operation began.

—Thirteen hundred Iraqi tanks, 800 armored vehicles and 1,100 artillery pieces are confirmed destroyed in verified bomb damage assessments (approximately one-third of the Iraqi inventory of 4,280 tanks, 1,870 APCs and 3,110 artillery pieces).



First combat use of global positioning system satellites.

Feb. 14: America carrier battle group arrives in Persian Gulf.

—DoD announces that Iraq's "military situation is precarious."

Feb. 15: Baghdad Radio broadcasts an Iraqi Revolutionary Command Council statement that Iraq is ready for negotiations "based on U.N. Security Council Resolution 660 of 1990, to achieve a solution to the Gulf crisis, including its withdrawal from Kuwait." President Bush an-

nounces that after initial happiness about the Iraq offer, "regrettably, the Iraq statement now appears to be a cruel hoax."

—DoD reports that military operations will continue until notified by higher authority of a cease-fire.

—Eight additional Iraqis surrender to U.S. forces. Central Command (CentCom) reports that 60 percent of EPWs have surrendered willingly.

—Would-be defectors may have been hindered by such obstacles as minefields, execution squads and retaliations against their families in Iraq.

Feb. 16: Marine and coalition ground forces re-position to confuse Iraqi reconnaissance and exchanged artillery and counter-artillery fire.

Feb. 17: Seven significant engagements along the Kuwait and Iraq border involve Marines and Iraqi ground forces.

Feb. 18: Within three hours of each other, USS *Tripoli* (LPH 10) and USS *Princeton* (CG 59) strike mines while conducting operations in the northern Persian Gulf. *Tripoli*, flagship in one of the most extensive minesweeping operations since the Korean War, sustains a 16-foot by 20-foot hole in her forward starboard side below the waterline. The explosion causes minor flooding to six spaces, minimized by damage control. Four crew members are injured, and the amphibious assault ship remains fully mission capable. *Princeton*, underway on half power, sustains damage including a crack in her superstructure. Three crewmen are injured — one seriously — and an EOD team is sent to assess the mission capability of the *Aegis* cruiser.

—Marine *Cobra* helos team up with Saudi, Kuwaiti and Marine observers and engage six Iraqi APCs. Two APCs are destroyed, the other four flee north.

Feb. 19: A Navy A-6 attacks and destroys five aircraft hidden in revetments in western Iraq.

—A minefield containing an estimated 22 mines is discovered and cordoned off in the Northern Persian Gulf. To date, 153 mines have been discovered.

—USS *Beaufort* (ATS-2) and minesweeper escort USS *Adroit* maneuver through an uncharted mine field to reach *Princeton*, and proceed to tow the cruiser to a Gulf

port for a detailed inspection.

Feb. 20: Significant increase in action between U.S. forces, including Marines, and Iraqi troops. A U.S. combined-arms team engages Iraqi infantry, tanks and artillery along the border. One U.S. service member is killed, seven wounded.

—There are several additional engagements including one in which 421 EPWs are captured.

—In one day-long engagement 100 kilometers above the border, U.S. artillery and tactical aircraft attack 300 vehicles in revetted positions, destroying 28 tanks and 28 vehicles. No Iraqi aircraft have flown in 10 days.

—To date, there are 55 U.S. fatalities: 17 KIAs, 38 non-combat fatalities; 25 WIAs; 27 MIAs (seven Navy, two Marines); nine POWs (two Navy, two Marines).

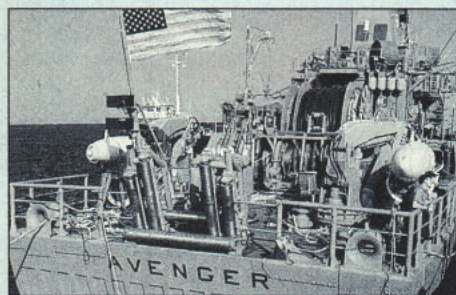


Photo by CDR John C. Reach USNR

First-ever location, identification and neutralization of a bottom-influence mine during combat operations (USS Avenger in the Northern Gulf).

—U.S. troop strength update: more than 527,000; 82,000-plus Navy, 94,000 Marines. Reserves recalled - 219,858 (17,198 Navy, 28,359 Marines).

—United States has lost 36 aircraft to date (28 fixed-wing in combat, five fixed-wing in noncombat mishaps, eight helicopters lost in noncombat). Coalition has lost 11 aircraft.

—To date, 42 Iraqi aircraft and six helos have been shot down in air-to-air engagements with no U.S. air-to-air losses.

Feb. 21: Iraq accepts a Soviet-brokered eight-point peace proposal, however the United States has "serious" reservations.

—*Wisconsin* fires 50 rounds off Khafji, Saudi Arabia, and destroys a command complex, while her RPVs spot targets and provide coastline reconnaissance.

—Marine AV-8Bs conduct bombing runs off the flight deck of USS *Nassau* (LHA 4). This is the first time in history that Marine AV-8B jump jets have conducted combat missions from a helicopter assault ship.

—Throughout the border region there is a continued increase in engagements, reconnaissance and counter-reconnaissance probes between U.S. forces, including Marines and Iraqi troops, involving artillery, attack helos and tactical air strikes.

—A Marine unit exchanges small arms and rocket fire with Iraqi troops, destroying Iraqi anti-aircraft systems and equipment.

—DoD authorizes awarding of the National Defense Service Medal to all U.S. service personnel on active duty after Aug. 2, 1990, in special recognition of "outstanding performance during *Desert Shield* and *Desert Storm*."

Feb. 22: After consultations with coalition partners, President Bush rejects Iraq's peace plan, declaring that the ground campaign will not be initiated before 12 p.m. (EST) on Feb. 23 if Iraq publicly agrees to:

- Large-scale, immediate withdrawal; complete within one week.
- Within 48 hours, leave Kuwait City and allow prompt return of the legitimate government of Kuwait.
- Withdraw from all prepared defenses along the Saudi-Kuwait and Saudi-Iraq borders.
- Return troops to Iraqi positions of Aug. 1, 1990.
- Cooperate with the International Red Cross and release all POWs and remains of servicemen within 48 hours.
- Remove all explosives or booby traps and provide data on location and nature of any land or sea mines.
- Cease all combat airfire, aircraft flights over Iraq and Kuwait except for transport aircraft carrying troops out of Kuwait.
- Cease all destructive action against Kuwaiti citizens and property, and release all Kuwaiti detainees.

—U.S. and coalition forces agree not to attack retreating Iraqi forces and will exercise restraint as long as withdrawal proceeds within the guidelines. Any breach

of the terms will bring an instant and sharp response from the coalition in accordance with U.N. Security Council Resolution 678.

—One Marine is killed and seven wounded by Iraqi artillery fire during three separate border engagements. Marines destroy 18 Iraqi tanks, 15 vehicles, and capture 87 EPWs.

—An estimated 100 Kuwaiti oil wells have been destroyed, along with oil tanks, export terminals and other installations. President Bush announces Iraq has "launched a scorched-earth policy destroying the entire oil production system of Kuwait."



Photo by PHAN Enrique Ortega

First combat use of the standoff land attack missile (SLAM).

Feb. 23: Sixteen hundred eighty-five Iraqi tanks (39 percent of known inventory), 925 armored vehicles (32 percent of known inventory) and 1,450 artillery pieces (48 percent of known inventory) are confirmed destroyed to date. Four hundred fifty of Kuwait's 950 oil wells are burning, creating thick smoke. Included in Iraq's destruction of Kuwait are wellheads, oil facilities and shipping terminals.

—Iraq does not comply with the deadline to meet coalition demands.

—At 8 p.m. (EST), President Bush addresses the nation to report he has directed Commander-in-Chief, U.S. Central Command, Army Gen. H. Norman Schwarzkopf, in conjunction with coalition forces, "to use all forces available, including ground forces, to eject the Iraqi army from Kuwait. ... The liberation of Kuwait has entered a final phase."

—Following President Bush's statement, SecDef announces the commencement of a "large ground offensive."

Feb. 24: Forces of the United States, United Kingdom, France, Saudi Arabia, United Arab Emirates, Bahrain, Qatar,

Oman, Egypt, Syria and Kuwait proceed in a major ground, naval and air offensive.

—At 4 a.m. (Gulf Time), assault elements of the 1st Marine Division (1st Battalion, 5th & 7th Marines, supported by 3rd Tank Battalion) and 2nd Marine Division (6th Marines and armor) easily breach Iraq's defense lines of minefields, barbed wire, bunkers and berms.

—Marines spearhead the attack, with Army paratroopers, air assault forces, special forces and ground forces of the United Kingdom, Saudi Arabia, Kuwait, Egypt and Syria. Within nine hours, Marines destroy numerous Iraqi tanks and bunkers; seize the Burgan oil field and Al Jabbar Airfield; and capture thousands of Iraqi troops.

—Amphibious task forces off Kuwait's coast conduct naval gunfire to keep Iraqi forces on the coastline.

—Ten hours into the ground offensive, U.S. casualties are "remarkably light." The offensive progresses with "dramatic success" with no reported use of chemical weapons by Iraq, and more than 5,500 EPWs captured.

—With the exception of one engagement between a Marine task force and an Iraqi armor unit that results in Iraqi tanks and troops retreating, there is only light contact with Iraqi forces. Iraqi troops are reported to be retreating, not engaging U.S. or coalition forces and surrendering. Some contact is made with Republican Guard troops.

—The Navy, along with British, Saudi and Kuwaiti naval forces conduct carrier air, minesweeping and amphibious missions along the east coast of Kuwait.

Feb. 25: More than 18,000 EPWs are reportedly captured. In several engagements, Marines attack an Iraqi force, destroying 50 to 60 tanks.

—In joint operations with the U.S. Army, Marines capture 20 T-62 tanks, 40 APCs, more than 400 EPWs and also engage a formation of 150 armored vehicles. Coalition forces have destroyed more than 270 Iraqi tanks since commencement of the ground offensive. Meanwhile, Marines fight their way to the outskirts of Kuwait City, but U.S. ground casualties remain extremely light: four KIA, 21 WIA.

—The United States reports four aircraft

lost during the ground phase (Two Marine AV-8Bs, one Marine OV-10 [Feb. 24/25] and one Army AH-64). Three of the five aircrewmembers are rescued, two are listed as missing.

—Naval forces, including *Wisconsin* and *Missouri*, continue naval gunfire support and other operations. *Missouri* alone fires 133 rounds, or 125 tons of ordnance, on targets. Minesweepers clear additional fire support areas for the battleships.

—HMS *Gloucester* (D 96), escorting *Missouri* in the Persian Gulf, destroys an incoming Iraqi *Silkworm* missile aimed at *Missouri*, with two *Sea Dart* missiles. A second *Silkworm* missile is fired, but falls into the Gulf. Navy aircraft destroy the missile launch site.



First combat use of M1 Abrams tanks.

—An Iraqi *Scud* missile, fired at Dhahran, Saudi Arabia, breaks up in flight and scatters debris over a U.S. housing compound in suburban Al Khobar, killing 27 U.S. Army Reserve personnel and wounding 100 others.

—At 5:35 p.m. (EST), Baghdad Radio announces that Iraq's "Foreign Minister informed the Soviet ambassador ... which constitutes a practical compliance with U.N. Security Council Resolution 660, that President Saddam Hussein has ordered his troops to make a fighting withdrawal from occupied Kuwait and return to the positions they occupied before the Aug. 2, 1990, invasion of Kuwait."

—The White House responds, announcing there is "no evidence to suggest the Iraqi army is withdrawing. ... We continue to prosecute the war. We have heard no reason to change that. ... Saddam Hussein must personally and publicly accept, explicitly, all relevant U.N. Security Council resolutions."

Feb. 26: On Baghdad Radio, Saddam Hussein announces Iraqi troops have begun

withdrawing from Kuwait and withdrawal would be completed within the day. In the 25-minute speech, Hussein maintains that "Kuwait was a part of Iraq which was separated from it in the past, and current circumstances are such that armed forces are forcing us to withdraw."

—President Bush calls Hussein's speech "... an outrage. He is not withdrawing. His defeated forces are retreating. The coalition will continue to prosecute the war with undiminished intensity. ... It is time for all Iraqi forces to lay down their arms. And that will stop the bloodshed. ... The liberation of Kuwait is close at hand."

—DoD announces that U.S. and coalition forces are engaging, out-flanking, out-maneuvering and destroying armed and fully-retreating Iraqi troops. Twenty-one Iraqi divisions are destroyed or rendered combat-ineffective.

—A Marine reconnaissance unit becomes the first U.S. force to enter Kuwait City, and retake control of the U.S. Embassy. Marines comb the neighborhoods for Iraqis. Pockets of resistance remain, including Republican Guard units. At Kuwait International Airport Marines engage Iraqi tanks.

—Navy A-6Es of *Ranger's* Attack Squadron 155 and Marine aircraft bomb Iraqi troops fleeing Kuwait City to Basra in convoys along two multi-lane highways. Numerous tanks, armored vehicles, jeeps, cars and tractor-trailers are destroyed.

—More than 30,000 EPWs are reported captured. U.S. ground casualties: four KIA, 21 WIA, two MIA. Overall total: 55 KIA, 155 WIA, 30 MIA and nine POWs.

—DoD reports that more than 100,000 sorties have been flown by coalition forces. The U.S. Navy and Marines flew 3,000 sorties on this day alone.

—Using RPVs and Marine spotters ashore to zero-in on targets, including artillery, mortar and missile positions, ammunition storage facilities and a *Silkworm* missile site, *Wisconsin* and *Missouri* fire more than 1,000 rounds of 16-inch ammunition in support of ground operations. *Missouri* alone fires more than 1 million pounds of ordnance. *Wisconsin's* RPVs provide on-site reconnaissance support from 11 nautical miles out for advancing Marines.

Feb. 27: Supported by attack aircraft, U.S. and coalition forces engage in a

climactic "classic tank battle," with approximately three divisions of Republican Guard forces in Iraq near the Euphrates Valley. These remnants of Iraq's forces are boxed in by a solid wall of U.S. forces on their eastern flank, and U.S. and coalition forces, including Marines, on their southern flank. The battle ends with Iraq losing 200 tanks, 50 armored vehicles and 20 artillery pieces.

—More than 50,000 EPWs have been captured (more than 48,000 since ground war began). U.S. casualties are 28 KIAs, 89 WIAs, five MIAs since start of the ground offensive. Overall total: 79 KIAs, 213 WIAs, 35 MIAs and nine POWs.

—President Bush addresses the nation, declaring "Kuwait is liberated. Iraq's army is defeated." The President announces that at 12 a.m. (EST), "exactly 100 hours since ground operations commenced and six weeks since the start of Operation *Desert Storm*, all U.S. and coalition forces will suspend further offensive combat operations."

—After the U.N. formally requests compliance, Iraq delivers a letter to the U.N. announcing its intention to comply with the cease-fire terms.

—U.S. and coalition air strikes and sporadic ground attacks continue until the 12 a.m. (EST) deadline. One hundred three thousand sorties have been flown (3,000 on this day) focusing on battlefield air interdiction and close-air support. Navy and Marine pilots have flown more than 26,000 combat sorties to date.

—While off the Kuwaiti coast assisting ground forces to secure and enter Kuwait City, *Wisconsin's* RPV detects two small boats fleeing Faylaka Island. Navy A-6s are called in and destroy the boats, believed to be carrying Iraqi secret police.

Feb. 28: The temporary cease-fire holds, with U.S. and coalition forces in defensive positions, conducting combat air patrols and reconnaissance operations. There are several incidents of Iraqi troops firing on U.S./coalition forces, attributed to isolated Iraqis cut off from communications and unaware of the cease-fire.

March 1: Marines have captured, destroyed or damaged, 1,060 tanks, 608 APCs, 432 artillery pieces and two *Scud* launchers during 100 hours of offensive combat.

Marine sweeps also uncover a bunker containing chemical artillery shells.

—Hundreds of Iraqi soldiers waving white flags on Faylaka Island surrender to *Missouri's* RPV flying overhead after their trench line was bombarded.

—The U.S., British, French and Canadian Embassies open in Kuwait City, and Kuwait International Airport becomes operational.

March 2: By an 11-to-1 vote, the U.N. Security Council approves Resolution 686, outlining the conditions Iraq must meet prior to a formal cease-fire.



Photo by PH1(A) Scott M. Allen

First use of nuclear-biological-chemical defense gear in the desert environment.

March 3: Schwarzkopf and Joint Forces Commander Gen. Prince Khalid bin Sultan bin Abdul Aziz meet seven Iraqi military officials, led by Deputy Chief of Staff Lt. Gen. Sultan Hasheem Ahmad, at Safwan Airfield in occupied Iraq.

—After a two-hour meeting, the Iraqi military formally accepts all demands for a permanent cease-fire. Iraq agrees to an immediate release of a small number of POWs as a token of good faith, and to safety measures to ensure that military forces do not accidentally engage each other with hostile fire.

—Navy CH-46 helos with loudspeakers round up 1,413 surrendering Iraqi troops on Faylaka Island. EPWs are ferried by helo

to *Ogden* for further transport to Saudi Arabian EPW facilities.

March 4: Iraq releases 10 POWs (six Americans, three of whom were designated MIA). The POWs are turned over to U.S. officials by the International Red Cross near the Jordanian border station of Ruwayshid, then transferred to the hospital ship *Mercy* for medical treatment.

—U.S. casualty data: 98 KIAs, 308 WIAs, 35 MIAs and six POWs (reflects release of six Americans). EPWs total more than 63,000 in Saudi Arabia; 37,000 in U.S. facilities; more than 3,000 in Turkey.

March 5: Iraq releases 35 POWs (15 Americans) to the International Red Cross. Revised U.S. casualty data: 115 KIAs, 65 non-combat fatalities, 330 WIAs, 37 MIAs and six POWs.

March 6: In a prisoner exchange, 35 released POWs transit from Baghdad to Riyadh and 294 Iraqi EPWs transit to Baghdad. U.S. POWs are then transferred to *Mercy* for medical treatment.

—Elements of the 1st Marine Division withdraw from Kuwait to defensive positions in Saudi Arabia. The 2nd Marine Division shifts into the 1st Marine Division's former positions.

—To date, more than 116,000 sorties have been flown. The United States has lost 57 aircraft (35 fixed-wing, 27 in combat, 8 in noncombat; 22 helos, five in combat, 17 in noncombat). U.S. casualty data: 115 KIAs, 78 noncombat fatalities, 338 WIAs, 26 MIAs (five Navy, two Marines) and no POWs.

—President Bush addresses a joint session of Congress: "I can report to the nation; aggression is defeated. The war is over."

March 8: After two weeks of nonstop minesweeping operations, the port of Kuwait City is safe enough to reopen.

March 9: The first Navy and Marine Corps personnel from the Persian Gulf theater arrived in CONUS today and yesterday.

March 10: Twenty-one repatriated American POWs arrive in CONUS.

March 11: With a helo from USS *Biddle* (CG 34) providing air cover, the 1,000th boarding of a freighter is completed in the northern Red Sea.

—Updated U.S. casualty data: 121 KIAs, 81 noncombat fatalities, 23 MIAs (5 Navy,

one Marine) and no POWs.

—*Mercy* and *Comfort* are ordered to stand down after seven months of deployment.

March 12: Command ship *USS LaSalle* (AGF 3) and *HMS Cattistock* (M 31) reopen major Kuwaiti port of Ash Shuaibah, steaming through a channel cleared of mines by 100 U.S. and coalition divers. Two tankers follow, bringing in potable water and supplies to assist in the reconstruction of Kuwait.

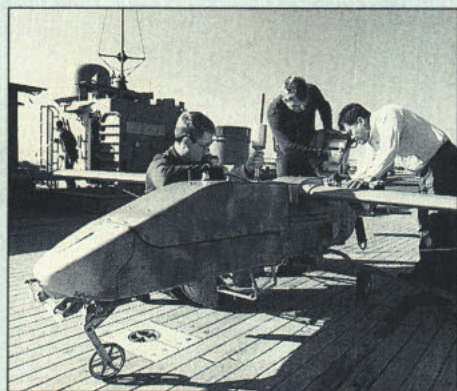


Photo by CWO2 Ed Bailey

First surrender of an enemy soldier to a remotely piloted vehicle.

March 13: President Bush establishes a Southwest Asia Service Medal for members of the U.S. Armed Forces who deployed to Southwest Asia or in surrounding contiguous waters or air space on or after Aug. 2, 1990, and participated in Operations *Desert Shield/Storm*.

—Iraq returns remains of 13 coalition dead (five United States, eight United Kingdom).

March 14: The Emir of Kuwait returns from exile.

March 17: Crew of *Tripoli* awarded Combat Action Ribbon for mine attack on Feb. 18. *Tripoli* remains in Bahrain undergoing repairs.

March 18: *USS Sylvania* (AFS 2) arrives at her Norfolk home port, the first return of a ship supporting *Desert Storm*.

March 20: One of two Iraqi SU-22 *Fitter* jets is shot down near Takrit, Iraq. The other aircraft landed on its own after the engagement. DoD announces that the flight of these two aircraft was a violation of terms that Iraqi officials agreed on.

March 21: U.S. ship strength update: 86 total; 51 - Persian Gulf, Gulf of Oman,

northern Arabian Sea; 22 - Red Sea; 13 - Eastern Mediterranean.

—U.S. casualty data: 124 KIAs, 102 non-combat fatalities, 357 WIAs, 21 MIAs (4 Navy, 0 Marines) and no POWs.

March 22: An Iraqi SU-22 *Fitter*, one of two aircraft flying, is shot down near Kirkuk, Iraq. The second aircraft, a PC-7 prop-driven trainer is not engaged, but the pilot ejects after the *Fitter* went down. This is the second breach of agreed terms.

—U.S. troop strength update: 445,000 in region; more than 55,500 Navy, more than 67,500 Marines. To date, 95,000 personnel have redeployed to the United States (29,500 Navy, 26,500 Marines); 6,661 naval reservists are currently serving in the Persian Gulf theater.

March 24: LT Mark D. Jackson dies of injuries sustained in a auto accident in Dhahran. This is the first-ever death of a naval reservist recalled to active duty in *Desert Storm*.

March 25: While actively sweeping for mines in the Persian Gulf, *Leader* detonates a suspected mine approximately 600 yards behind the ship. The explosion causes the crankshaft in the main propulsion unit to crack, however no injuries were reported. *Leader* continues her mission, then proceeds to port under her own power for scheduled maintenance.

March 26: Naval maritime intercept update: 8,379 challenges; 1,055 boardings; 53 diversions. The Navy has conducted 571 boardings.

—U.S. Navy ship strength update: 84 total; 48 - Persian Gulf/North Arabian Sea/Gulf of Oman, 8 - Red Sea, 28 - Mediterranean.

—U.S. troop strength update: more than 411,500 in region; more than 43,000 Navy, more than 60,500 Marines. To date, 128,500 personnel have redeployed to the United States (42,000 Navy, 33,500 Marines).

March 27: The first Navy air combatants returning to CONUS, Carrier Air Wing 3 (embarked on *Kennedy*) and Carrier Air Wing 17 (embarked on *Saratoga*) arrive at their U.S. homeports.

March 28: Three Marines are wounded in a drive-by shooting near their encampment in the Al Jubail area of Saudi Arabia. One is treated and released, the others are hospitalized and listed in good condition.

—The first Navy carrier battle groups returning to CONUS, *Kennedy* and *Saratoga*, arrive at their East Coast home ports.

March 30: *Princeton* crew awarded the Combat Action Ribbon for Feb. 18 mine attack.

April 1: The first West Coast warship to return, *USS Marvin Shields* (FF 1066), arrives at her San Diego home port.

April 2: Naval maritime intercept update: 8,598 challenges; 1,110 boardings; 58 diversions. The Navy has conducted 581 boardings.

—U.S. Navy ship strength update: 82 total; 44 - Persian Gulf/North Arabian Sea/Gulf of Oman, 13 - Red Sea, 25 - Mediterranean. A total of 13 Navy submarines conducted surveillance and reconnaissance operations in support of *Desert Shield/Storm*. Two of these, *Louisville* and *USS Pittsburgh* (SSN 720), conducted under-sea-launched *Tomahawk* missile attacks against Iraq.

April 6: Iraq accepts the U.N. terms for a formal cease-fire.

April 9: The U.N. Security Council approves Resolution 689 establishing a United Nations-Iraq-Kuwait Observer Mission to monitor a permanent cease-fire.

April 11: U.S. troop strength update: more than 310,000 personnel in the region; more than 33,000 Navy, more than 38,500 Marines. To date, more than 230,000 personnel have redeployed to the United States (52,000 Navy, 55,500 Marines).

—Up to now, 2,386 Navy and 4,970 Marine reservists have been demobilized; 16,733 naval and 25,578 Marine reservists are still on active duty.

—The U.N. Security Council announces that a formal cease-fire has been established, ending the Persian Gulf War. □



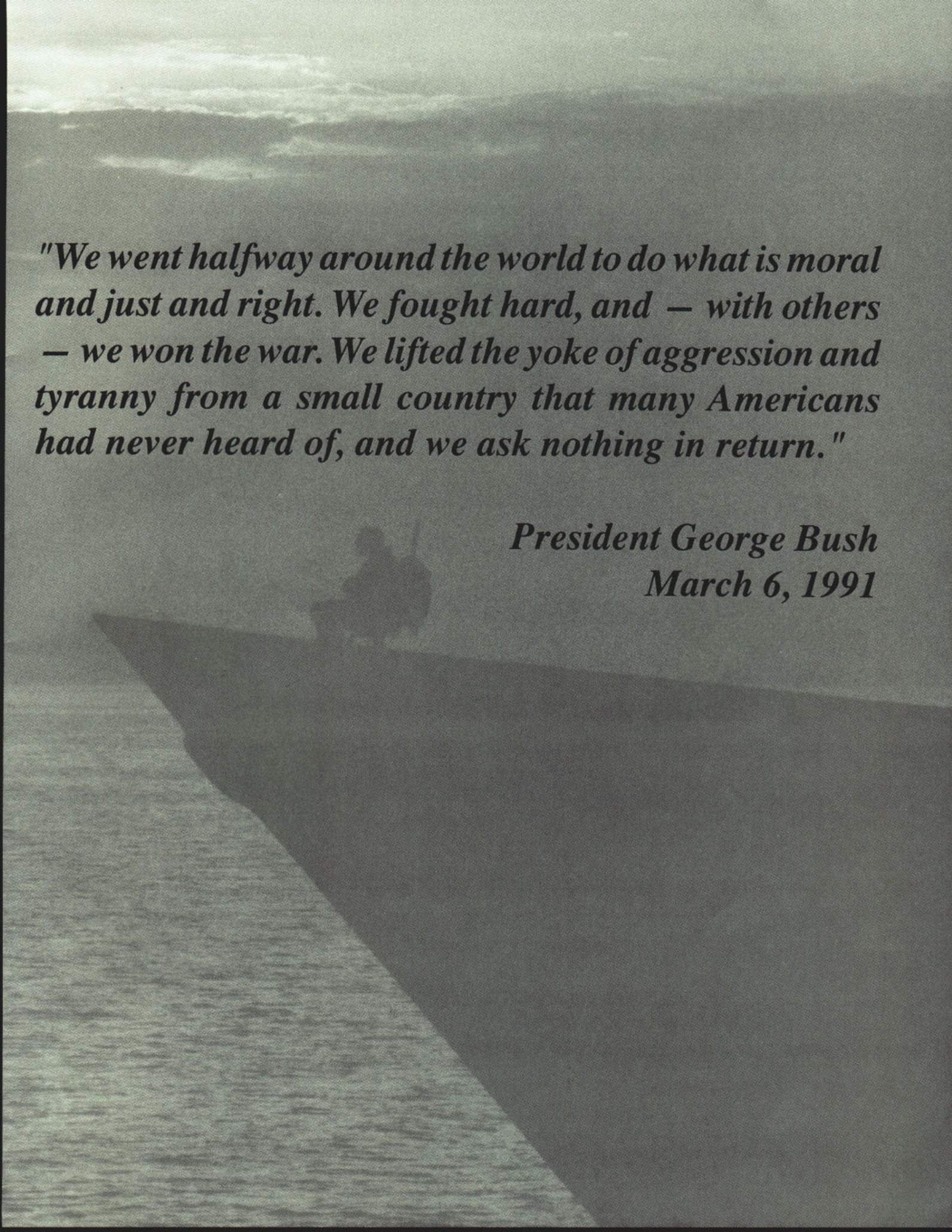
Photo by Todd Buchanan/Philadelphia Inquirer

In memory of our fallen shipmates

Lance Cpl. Frank C. Allen
Cpl. Allen M. Auger
AE3 Michael L. Belliveau
BT2 Alan H. Benningfield
Cpl. Stephen E. Bentzlin
Cpl. Kurt A. Benz
Cpl. Dennis W. Betz
Cpl. Scott F. Bianco
BTFN Tyrone M. Brooks
AA Christopher B. Brown
AA Darrell K. Brown
AA Steven A. Budizan
AT2 Andrew T. Cady
SN Monray C. Carrington
AN Larry M. Clark
Staff Sgt. Michael R. Conner Sr.
LT Patrick K. Connor
LCDR Barry T. Cooke
Cpl. Michael D. Cooke
LT William T. Costen
Cpl. Ismael Cotto
AMS3 James F. Crockford
Capt. William D. Cronin Jr.
AG1 Shirley M. Cross
Lance Cpl. James B. Cunningham
SM3 Delwin Delgado
WO1 Thomas M. Dffenbaugh
Capt. Gary Dillon
Capt. Kevin R. Dolvin
Lance Cpl. Joseph D. Dougherty III
LT Robert J. Dwyer
Capt. Jonathan R. Edwards
Lance Cpl. Eliseo Felix
AO3 Anthony J. Fleming
AKAN Gilbert A. Fontaine
Lance Cpl. Arthur O. Garza
BT3 David A. Gilliland
Lance Cpl. Troy L. Gregory
Cpl. Albert G. Haddad Jr.

Sgt. James D. Hawthorne
Capt. David R. Herr Jr.
AEAA Kevin J. Hills
Pfc. Adam T. Hoage
Sgt. Larry G. Hogan
Cpl. Raymond L. Horwath Jr.
LT Daniel V. Hull
Capt. William J. Hurley
BT2 Mark E. Hutchison
FN Wilton E. Huyghue
LT Mark D. Jackson
FC3 Timothy J. Jackson
Lance Cpl. Thomas A. Jenkins
MMFA Dale William Jock
Cpl. Daniel D. Joel
AA Alexander Jones
EM3 Daniel M. Jones
Cpl. Phillip J. Jones
AMS2 Troy Josiah
Sgt. Kenneth T. Keller
MSSA Nathaniel H. Kemp
Sgt. John R. Kilkus
Cpl. Victor T. Lake Jr.
Lance Cpl. Brian L. Lane
Lance Cpl. James M. Lang
Lance Cpl. Michael E. Linderman Jr.
LT James H. Love
Lance Cpl. James H. Lumpkins
EM2 Daniel Lupatsky
FN Michael N. Manns Jr.
Maj. Eugene McCarthy
AN Brent A. McCreight
BTFA Daniel C. McKinsey
Sgt. Garrett A. Mongrella
1st Lt. Michael N. Monroe
Staff Sgt. Lance M. Monsen
Sgt. Candelario Montalvo
Staff Sgt. Thomas J. Moran
AA Randy L. Neel
Pfc. Michael A. Noline

Lance Cpl. Arthur D. Oliver
Cpl. Aaron A. Pack
CWO4 John M. Paddock
BT2 Fred R. Parker Jr.
ABF2 Marvin J. Plummer
Lance Cpl. Kip A. Poremba
Lance Cpl. Christian J. Porter
Capt. Manuel Rivera Jr.
Sgt. Ernest Rivers
Cpl. Timothy W. Romei
DS3 Matthew J. Schiedler
Lance Cpl. Thomas J. Scholand
Pfc. Scott A. Schroeder
DK3 Timothy B. Seay
MSSA Jeffrey A. Settimi
Staff Sgt. David A. Shaw
FTC Jeffrey W. Shukers
MM3 James A. Smith Jr.
Lance Cpl. David T. Snyder
LT John M. Snyder
LCDR Michael S. Speicher
Capt. David M. Spellacy
Pfc. Dion J. Stephenson
Lance Cpl. Anthony D. Stewart
RMSN Roderick T. Stewart
Cpl. James H. Sylvia
AME3 Phillip J. Thomas
Capt. James K. Thorp
Lance Cpl. Thomas R. Tormanen
LT Charles J. Turner
Capt. Reginald C. Underwood
BT1 Robert L. Volden
Lance Cpl. James E. Waldron
Lance Cpl. Daniel B. Walker
LT David A. Warne
AE2 Brian P. Weaver
Capt. James N. Wilbourn
MS2 Philip L. Wilkinson
CWO2 Bernard S. Winkley



"We went halfway around the world to do what is moral and just and right. We fought hard, and — with others — we won the war. We lifted the yoke of aggression and tyranny from a small country that many Americans had never heard of, and we ask nothing in return."

*President George Bush
March 6, 1991*

